INCH-POUND
ATPD 2223
9 January 1998
SUPERSEDING
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PURCHASE DESCRIPTION

ARMORED RECONNAISSANCE/AIRBORNE ASSAULT VEHICLE: FULL TRACKED, 152MM, M551; PROCESSING FOR STORAGE AND SHIPMENT OF

1. SCOPE

1.1 Scope. This purchase description covers processing of the M551 Assault Vehicle, Reconnaissance/Airborne, Armored, mounting a 152MM Gun, designated General Sheridan, for immediate use shipment and for domestic or oversea shipment, including car-loading; meeting the requirements of levels A, B and C processing (see 1.2).

1.2 Classification. Processing shall be of the following levels as specified (see 6.1):

Level A	- Processing for domestic or oversea shipment and any storage outside of buildings in excess of 90 days from date of processing (periodic care and preservation during storage required).
Level B & C	- Limited processing for immediate shipment and for domestic or oversea shipment (excluding open deck loading) and any storage not to exceed 90 days from date of processing.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: U.S. Army Tank-automotive and Armaments Command, ATTN: AMSTA-TR-E/IE, Warren, MI 48397-5000.

AMSC N/A AREA PACK

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3 and 4 of this purchase description. This section does not include documents cited in other sections of this purchase description or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirement documents cited in sections 3 and 4 of this purchase description, whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATIONS

FEDERAL

A-A-203	- Paper, Kraft, Untreated
A-A-374	- Sodium Bicarbonate, Technical.
A-A-870	- Engine Antifreeze/Coolant: Inhibited Concentrated, Ethylene Glycol.
A-A-883	- Tape, Pressure Sensitive Adhesive.
A-A-1898	- Cushioning Material, Cellulosic, Packaging.
A-A-50177	- Paper, Lens.
A-A-52518	- Tire, Pneumatic: Retread and Repair Materials.
A-A-52520	- Hardwood: Floorboards and Platforms; For Military Vehicles (Metric).
A-A-52624	- Antifreeze, Multi-Engine Type.
L-P-378	- Plastic Sheet and Strip, Thin Gage, Polyolefin.
O-E-760	- Ethyl Alcohol (Ethanol); Denatured Alcohol: Proprietary Solvents and Special Industrial Solvents.
O-S-801	- Sulfuric Acid, Electrolyte; For Storage Batteries.
P-D-220	- Detergent, General Purpose.
V-T-295	- Thread, Nylon.
QQ-A-225/8	- Aluminum Alloy Bar, Rod, Wire, and Special Shapes; Rolled, Drawn, or Cold Finished, 6061.
QQ-P-416	- Plating, Cadmium (Electrodeposited).

QQ-S-698	- Steel, Sheet and Strip, Low-Carbon.
TT-C-490	- Cleaning Methods and Pretreatment of Ferrous Surfaces for Organic Coatings.
TT-E-485	- Enamel, Semigloss, Rust-Inhibiting.
TT-E-529	- Enamel, Alkyd, Semi-Gloss, Low VOC Content.
TT-T-81	- Tags, Shipping and Stock.
TT-P-664	- Primer, Coating, Alkyd, Corrosion Inhibited, Lead and Chromate Free, VOC-Compliant.
VV-L-800	- Lubricating Oil, General Purpose, Preservative (Water-Displacing, Low Temperature).

DEPARTMENT OF DEFENSE

MIL-B-117	- Bags, Sleeves and Tubing, Interior Packaging.
MIL-C-450	- Coating Compound, Bituminous Solvent Type, Black (for Ammunition).
MIL-D-1000	- Drawings, Engineering and Associated Lists.
MIL-R-3065	- Rubber, Fabricated Products
MIL-P-3420	- Packaging, Materials, Volatile Corrosion Inhibitor Treated, Opaque.
MIL-I-8574	- Inhibitors, Corrosion, Volatile, Utilization of.
MIL-PRF-10924	- Grease, Automotive and Artillery.
MIL-PRF-16173	- Corrosion Preventive Compound, Solvent Cutback, Cold-Application.
MIL-D-16791	- Detergents, General Purpose (Liquid, Nonionic).
MIL-C-20696	- Cloth, Coated, Nylon, Waterproof.
MIL-L-21260	- Lubricating Oil, Internal-Combustion Engine, Preservative.
MIL-I-22110	- Inhibitors, Corrosion, Volatile, Crystalline.
MIL-F-22191	- Barrier Material, Transparent, Flexible, Heat Sealable.
MIL-P-53030	- Primer Coating, Epoxy, Water Reducible, Lead and Chromate Free
MIL-T-37402	- Tester, Antifreeze Solutions.
MIL-L-46002	- Preservative Oil, Contact and Volatile Corrosion Inhibited.
MIL-P-52905	- Paint Camouflage, Removable.
MIL-A-53009	- Additive, Antifreeze Extender, Liquid Cooling Systems.

STANDARDS

FEDERAL

FED-STD-595	- Colors.
FED-STD-751	- Stitches, Seams, and Stitchings.

DEPARTMENT OF DEFENSE

MIL-STD-129	- Marking for Shipment and Storage.
MIL-STD-2073-1	- Military Packing, Standard Practice for.
MS20230	- Grommets, Metallic, Plain and Spur, With Washers, Type I and Type III.
MS20995	- Wire, Safety or Lock.
MS24665	- Pin, Cotter (Split).
MS27183	- Washer, Flat (Round, Steel, Cadmium Plated) General Purpose.
MS35338	- Washer, Lock-Spring, Helical, Regular (Medium) Series.
MS35751	- Bolt, Square Neck, Round Head, (Carriage), Steel, Cadmium, Zinc Plated.
MS51108	- Screw, Cap, Hexagon Head (Finished Hexagon Bolt), Shank Drilled for Cotter Pin, Alloy Steel, Grade 8 Phosphate Coated, UNF-2A.
MS51967	- Nut, Plain, Hexagon-Carbon Steel, Cadmium Plated UNC-2B.

2.2.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation.

DRAWINGS

ARMY

538458	- Fastener, Slide, Interlocking, Non-Separating, Medium Heavy.
8710565	- Rope.
10941915	- Washer, Flat, Metal, Round, Hardened.
10954899	- Positioning and Tie Down, Vehicle.
11604883	- Closure Kit, Vehicle Protective.

PUBLICATIONS

PACKAGING DATA SHEETS

8736408	- OVE, Packaging of.

(Copies of drawings and packaging data sheets are available from the U.S. Army Tank-automotive and Armaments Command, ATTN: AMSTA-TR-E/IE, Warren, MI 48397-5000.)

2.2.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation.

ASSOCIATION OF AMERICAN RAILROADS PUBLICATION

Section No. 1	- General Rules Governing Loading of Commodities On Open Top Cars.
Section No. 6	- Rules Governing the Loading of Department of Defense Materiel on Open Top Cars.

(Application for copies should be addressed to the Association of American Railroads, 59 East Van Buren, Chicago, IL 60605.)

2.3 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted are those listed in the issue of the DoDISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DoDISS are the issues of the documents cited in the solicitation (see 6.2).

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (AMSE)

AMSE B18.2.1	- Square and Hex Bolts and Screws Inch Series
AMSE Y14.5	- Dimensioning and Tolerancing.
AMSE Y14.6	- Screw Thread Representation.

(Application for copies may be obtained from the American Society of Mechanical Engineers, 3 Park Avenue, New York, NY 10016.)

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A36	- Carbon Structured Steel, Standard Specification for (DoD Adopted).
ASTM A108	- Steel Bars, Carbon, Cold-Finished, Standard Quality, Standard Specification for (DoD Adopted).
ASTM A153/153M	- Zinc Coating (Hot-Dip) on Iron and Steel Hardware, Standard Specification for (DoD Adopted).
ASTM A513	- Electric-Resistance-Welded Carbon and Allow Steel Tubing, Standard Specification for (DoD Adopted).
ASTM A519	- Seamless Carbon and Alloy Steel Mechanical Tubing, Standard Specification for (DoD Adopted).
ASTM A575	- Steel Bars, Carbon, Merchant Quality, M-Grades, Standard Specification for (DoD Adopted).
ASTM A576	- Steel Bars, Carbon, Hot-Wrought, Special Quality E1-1995, Standard Specification for (DoD Adopted).
ASTM A641	- Zinc-Coated (Galvanized) Carbon Steel Wire, Standard Specification for (DoD Adopted).
ASTM A663	- Steel Bars, Merchant Quality, Mechanical Properties E1-1994, Standard Specification for (DoD Adopted).
ASTM A675	- Steel Bars, Carbon, Special Quality, Mechanical Properties E1-1996, AASHTONO: M227/M227M, Standard Specification for (DoD Adopted).
ASTM A809	- Aluminum-Coated (Aluminized) Carbon Steel Wire, Standard Specification for (DoD Adopted).
ASTM A818	- Copperized Carbon Steel Wire E1-1996, Standard Specification for (DoD Adopted).
ASTM A853	- Steel Wire, Carbon, For General Use, Standard Specification for (DoD Adopted).
ASTM B221	- Aluminum and Aluminum Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes, Standard Specification for (DoD Adopted).
ASTM B241	- Aluminum and Aluminum Alloy Seamless Pipe and Seamless Extruded Steel E1-1994 (DoD Adopted).
ASTM B633	- Electrodeposited coatings of Zinc on Iron and Steel E1-1994 (DoD Adopted).
ASTM D1974	- Methods of Closing, Sealing, and Reinforcing Fiberboard, Standard Specification for (DoD Adopted).
ASTM D3953	- Standard Specification for Strapping, Flat Steel and Seals Standard Specification for (DoD Adopted).

ASTM D5330	- Standard Specification for Pressure-Sensitive Tape for Packaging, Filament Performed (DoD Adopted).
ASTM D5486	- Standard Specification for Pressure-Sensitive Tape for Packaging, Box Closure and Sealing (DoD Adopted).
ASTM F1667	- Driven Fasteners: Nails, Spikes, and Staples, Standard Specification for (DoD Adopted).

(Application for copies should be addressed to American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

3. REQUIREMENTS

3.1 Level A.

3.1.1 First production processed vehicle. Unless otherwise specified (see 6.1), the first production processed vehicle shall be subjected to the inspection specified in 4.2. Approval of the first production processed vehicle shall not relieve the contractor of his obligation to process all vehicles in accordance with this purchase description. Except as otherwise specified by the procuring activity, any changes to materials or design after approval of the first production processed vehicles, shall require submission of an additional production processed vehicle to the inspection specified in 4.2.

3.1.2 One of the next 10 production processed vehicles. After approval of the first production processed vehicle (see 3.1.1), one of the next 10 production processed vehicles shall be selected by the Government representative for inspection specified in 4.2.

3.1.3 Materials.

3.1.3.1 Stock numbers. Materials to be obtained through Government supply channels shall be ordered by stock numbers or specifications.

3.1.4 Preparation prior to processing. Except as otherwise specified herein, and to the maximum extent consistent with production efficiency, economy, and safe storage and shipment, vehicle shall be prepared for storage and shipment in a completely assembled condition after test runs, and completion and approval of all necessary repairs. Specified equipment shall be installed and all adjustments made so that the vehicle may be operated, shipped, and placed into service with a minimum of delay.

3.1.4.1 Processing records. Records of vehicle processing shall be maintained and readily available for review by the Government representative.

3.1.4.2 Disassembly. Parts vulnerable to damage and pilferage, and projecting parts whose removal will accomplish the desired reduction in cube, shall be removed from the vehicle. Removed parts shall be preserved, packaged, and packed. The packed parts shall be identified and placed in a protected location in the vehicle and secured in a manner to prevent movement and damage during shipment and storage. Removed bolts, nuts, screws, pins, and washers shall be placed in one of the mating parts and secured.

3.1.4.2.1 Matchmarking. Parts removed from the vehicle shall be matchmarked when necessary to facilitate reassembly. Matchmarking information shall be on cloth shipping tags conforming to type A of UU-T-81, or metal tags marked with soluble paint and attached to mating parts. The marked cloth shipping tags shall be water-proofed in accordance with MIL-STD-129.

3.1.5 Cleaning and drying.

3.1.5.1 Interior of vehicle. Vehicle interior surfaces shall be cleaned in accordance with applicable sections of MIL-STD-2073-1, except that cleaning compounds shall be in accordance with detergents conforming to P-D-220 or MIL-D-16791, in warm water solution. Liquids under pressure shall be used only in the engine compartment. Drying shall be in accordance with MIL-STD-2073-1.

3.1.5.1.1 Battery supports and retainers. Battery supports and retainers shall be cleaned with a solution composed of 1/2 pound of sodium bicarbonate, conforming to A-A-374, per gallon of water, and flushed with clear water and dried. Battery supports and retainers shall be coated with compound conforming to MIL-C-450.

3.1.5.1.2 Backrests and seats. Installed backrests and cushioned components of seats shall be washed with a solution of soap and water, rinsed with clear water, dried, and immediately packaged (see 3.1.15).

3.1.5.1.3 Fire control items. Exposed optical glass components of fire control items shall be cleaned by blowing on exposed optical glass surfaces with air from a hand syringe, or by use of a clean camel-hair brush, followed by the use of ethyl alcohol conforming to O-E-760. In cases of contamination not removable by alcohol, cleaning shall be accomplished by use of a solution consisting of two ounces of detergent conforming to MIL-D-16791, 1/2 gallon of alcohol conforming to O-E-760, and one gallon of distilled water. Using a swab made of lens tissue conforming to type I or type II of A-A-50177, optical surfaces shall be washed with the cleaning agent; and washing shall be repeated, using a clean swab each time, until no dirt or other foreign matter remains on the surface. Cleaning shall be accomplished with a minimum of pressure on the surface. Cleaning shall be accomplished with a minimum of pressure and rubbing, and without the

use of cloth or rubber materials, in order to prevent damage to lens coatings. Immediately after cleaning, the optics shall be covered as specified in 3.1.13.1.

3.1.5.1.4 Fuel filters. Except when fuel filter elements are new and clean, and prior to engine preservation (see 3.1.9), fuel filter shells shall be drained, removed and cleaned in accordance with the applicable procedures of MIL-STD-2073-1 and dried by any applicable procedure specified therein. New filter elements shall be installed if necessary. Fuel filter shells shall then be reinstalled using new gaskets.

3.1.5.2 Exterior of vehicle. Using a mild detergent, vehicle exterior surfaces including the engine compartment shall be cleaned in a manner which will assure removal of all foreign matter, including excess cleaning material. Cleaning shall be followed by a complete rinsing with clear water, then thorough drying. Vehicle shall be cleaned without directing steam or water jet at or above the ring opening between turret and upper hull or against armament. Caution shall be exercised to prevent the entry of water into vehicle.

3.1.5.2.1 Gun-launcher. When inspection indicates the need for reprocessing of gun-launcher (see 4.5.2.3), gun-launcher shall be cleaned and dried in accordance with any applicable process or processes which are not injurious to the item.

3.1.6 Relubrication. When vehicle has been operated in excess of 50 miles since previous lubrication, or after a detergent or steam cleaning, vehicle shall be lubricated using materials in accordance with drawings, specifications or lubrication order pertinent to the vehicle. All exposed oil can points such as hinges, latches, clevises and pins, and control cable pulley pins shall be lubricated with oil conforming to VV-L-800. Excess lubricating material shall be removed after lubrication.

3.1.7 Transmission. Transmission shall contain preservation oil only. Preservative oil in transmission shall conform to type I, grade 10 of MIL-I-21260, filled to operating level. DD Form 1397 (see 3.1.19), shall be completed to indicate grade of preservative oil used.

3.1.8 Engine crankcase and generator drive gear box. Engine crankcase and generator drive gear box shall be filled with lubricating oil conforming to MIL-L-21260, type II, grade 10 or 30, as specified by the applicable drawing, specification or lubrication order. DD Form 1397 shall be completed to indicate type and grade of preservative oil used.

3.1.9 Engine preservation. Engine preservation as specified in 3.1.9.1 through 3.1.9.4 shall be accomplished without interruption, except for cooling as specified in 3.1.9.2.

3.1.9.1 Preservation through fuel system. Engine fuel supply line shall be disconnected at the most convenient point nearest the fuel tank. A line from a portable container containing preservative oil conforming to grade 1 of MIL-L-46002, shall be connected to the disconnected fuel supply line loading to the engine. Engine fuel return line shall be disconnected at the most convenient point and a transparent plastic line connected to the engine fuel return line. The other end of the transparent line shall be inserted into a recovery container to collect the returned fuel. The engine shall be started and operated at approximately 1200 revolutions per minute (rpm) until undiluted preservative oil is flowing into the recovery container. Engine shall then be stopped. Manifold flame heater switch shall be operated concurrently with fuel system preservation. Auxiliary fuel return line shall be disconnected and original fuel return line reconnected. Recovered fuel and preservative oil mixture shall be discarded.

3.1.9.2 Preservation through combustion chamber. Prior to continuation of engine processing, the engine shall be allowed to cool for 24 hours or until engine temperature is 100 degrees Fahrenheit (°F) or less, measured at injector nozzle flange surface of all cylinders. Induced air currents or flushing cold water through cooling system may be used to accelerate cooling of engine. Rocker arm covers or side access plates shall be removed and the exhaust valves of each cylinder shall be mechanically depressed and held in open position by using 0.025 inch spacers or any method which will hold the valves open without damage to the engine.

CAUTION: Special precautions shall be taken to assure that clearance between piston and valve is not exceeded. Prior to actual processing of first engine, with valves depressed, engine shall be manually rotated, if possible, or rotated by starter if manual turning is not possible. Examination shall be made to assure there is no contact of piston and depressed valve.

The throttle shall be placed at maximum open position and engine cranked with starting motor for 30 seconds.

CAUTION: Special precautions shall be taken to assure that the amount of oil injected into the combustion chambers will not result in a hydrostatic lock. Prior to processing additional engines, the first engine shall be processed as specified above and allowed to stand for 12 hours. Engine shall then be manually rotated or rotated by the starter if manual turning is not possible, to assure that amount of oil injected permits free rotation of the engine.

Portable container shall be removed and vehicle line reconnected. Valve depressing devices shall be removed. Interior surfaces of rocker arm covers, side access plates, valves, valve springs, and rocker arms shall be atomized sprayed with preservative oil conforming to grade 1 of MIL-L-46002. Damaged gaskets shall be replaced and rocker arm covers or side access plates reinstalled.

3.1.9.3 Preservation through air intake and exhaust system. After preservation through fuel system (3.1.9.1) and combustion chamber (3.1.9.2), 15 grams of volatile corrosion inhibitor compound (VCI), conforming to type I of MIL-I-22110, shall be fogged into the exhaust opening. Opening shall then be sealed with tape conforming to type I, class 1 of ASTM D5486. Hose shall be disconnected at the air intake and 15 grams of VCI shall be fogged into the air intake opening. The air intake opening and engine crankcase breathers shall then be sealed with a plastic plug or with tape conforming to type I, class 1 of ASTM D5486. A red warning tag bearing the information: "ENGINE PRESERVED WITH VCI - DO NOT CRANK" and "BEFORE CRANKING, REMOVE CAPS, TAPE OR PLUGS AND REINSTALL HOSE" shall be placed in a conspicuous location within the driver's compartment. DD Form 1397 shall be marked to indicate engine is preserved with VCI compound and oil.

3.1.9.4 Preservation through dipstick shroud opening. After preservation specified in 3.1.9.1, 3.1.9.2 and 3.1.9.3, dipstick shall be removed and six ounces of lubricating oil conforming to grade 1 of MIL-L-46002 shall be atomized sprayed into the crankcase through the dipstick shroud opening. An extension nozzle of sufficient length to allow the spraying nozzle to be within the crankcase shall be used. Nozzle shall not be submerged in the oil within the crankcase. Dipstick shall be reinstalled. All openings leading to interior of the engine, including dipstick shroud opening and oil filler cap shall be sealed with tape conforming to type I, class 1 of ASTM D5486.

3.1.10 Fuel tank. Fuel shall be removed from the fuel tank to the maximum extent possible. When fuel tank cap and filler screen cannot be adequately preserved in place, fuel tank cap and filler screen shall be removed and coated with preservative oil conforming to VV-L-800. One quart of preservative oil conforming to VV-L-800, shall be poured into the fuel tank and an additional quart for each five gallons of residual fuel remaining in the fuel tank. If removed, fuel tank cap and filler screen shall be reinstalled.

3.1.11 Cooling system. Prior to, or concurrently with, the other preservation requiring engine operation, cooling system shall be protected by one of the following procedures, depending on the condition of shipment and storage, as specified (see 6.1). If no procedure is specified, cooling system shall be protected in accordance with 3.1.11.1. DD Form 1397 shall be completed to indicate coolant used.

3.1.11.1 Water and antifreeze procedure. Cooling system shall contain a clean solution consisting of equal parts by volume of antifreeze (ethylene glycol) conforming to type I of A-A-870, and water, filled to capacity. Engine shall be operated until temperature has been reached that causes thermostat to open to assure complete mixing and even distribution of the antifreeze solution. A warning tag, bearing the information "COOLING SYSTEM FILLED WITH WATER AND ANTIFREEZE SOLUTION (ETHYLENE GLYCOL) IN EQUAL

PARTS BY VOLUME - DO NOT DRAIN", shall be securely attached to radiator filler neck. When tested as specified in 4.5.2.4, coolant shall show protection to minus (-) 40°F.

3.1.11.2 Antifreeze compound procedure. For shipment and storage in areas where the temperature drops below -40°F, cooling system shall be filled with antifreeze compound conforming to A-A-52624. The compound shall be used without dilution. A warning tag, bearing the information "COOLING SYSTEM FILLED WITH ANTIFREEZE (ARCTIC-TYPE) - DO NOT DRAIN", shall be securely attached to radiator filler neck.

3.1.11.3 Water and corrosion inhibitor procedure. For shipment and storage within the bounds of 30 degree north latitude and 30 degree south-latitude, except Continental United States, cooling system shall be preserved as follows:

Cooling system shall be filled with clear water up to, but not including, the radiator upper tank. A corrosion inhibitor conforming to MIL-A-53009 shall be added in the proportion of five ounces of the inhibitor for each 10 quarts of water. The inhibitor shall be dissolved in two quarts of warm water and poured into the radiator while the engine is idling. More water shall be added, if necessary, to fill the radiator to operating level. A warning tag, bearing the information "COOLING SYSTEM DOES NOT CONTAIN ANTIFREEZE - FILLED WITH WATER AND INHIBITOR", shall be securely attached to radiator filler neck.

3.1.12 Batteries, cables, and electrolyte.

3.1.12.1 Dry charge batteries and cables. Dry charged batteries shall be installed and secured in the vehicle battery carrier. Battery cables shall be secured to battery carrier with 3/4 inch tape conforming to type IV of ASTM D5330. Filler cap openings shall be sealed by placing a 2 inch wide by 3 mil thick sheet of film, conforming to type I of MIL-F-22191, over all filler cap openings with cap removed. The sheet shall be of sufficient length to allow sheet to be depressed into the filler cap opening to the same depth as the filler plug. Filler caps shall be screwed or inserted into the filler openings to form a complete seal without damaging the sheet.

3.1.12.2 Electrolyte. Electrolyte shall be packaged, packed and marked in accordance with the applicable procedures of O-S-801.

3.1.12.2.1 Stowage. Electrolyte shall be stowed with OVE, secured independently in a manner to prevent movement and damage in transit and permitting easy removal at ports when special stowing is required by maritime regulations.

3.1.13 Fire control items.

3.1.13.1 Quadrant, periscopes, telescopes and vision blocks. Quadrant, periscopes, telescopes and vision blocks shall remain installed. Driver's periscope quick release latches shall be safety-wired to prevent accidental release. Immediately after cleaning (see 3.1.5.1.3), optics shall be covered with a four layer thickness of lens tissue conforming to MIL-P-3988. Lens tissue shall be secured with tape conforming to A-A-883. All exposed, unpainted metal surfaces shall be coated with grease conforming to MIL-PRF-10924.

3.1.14 Gun-launcher and related items.

3.1.14.1 Gun-launcher. Immediately after cleaning (see 3.1.5.2.1), bore and chamber of the gun-launcher shall be coated with preservative oil conforming to VV-L-800. Excess preservative shall be allowed to drain from coated surfaces. A strip of VCI treated carrier material conforming to type I, class 3, style A of MIL-P-3420 shall be cut and rolled into a tube with the VCI treated surface on the outside. The carrier material shall be of a size that will provide a continuous cover for the bore and chamber surfaces. The rolled carrier material shall be inserted into gun-launcher extended entire length of bore and chamber. The carrier tube shall not be forced or kinked in a manner which would obstruct the chamber. The gun-launcher shall remain in battery with turret travel lock secured in the lock position.

3.1.14.1.1 Muzzle plug. A plug shall be provided for the muzzle end of the gun-launcher. Muzzle plug shall be completely overwrapped with aluminum foil, positioned in muzzle end of gun-launcher and secured in place with tape conforming to type I, class 1 of ASTM D5486. The joint around muzzle plug and gun-launcher shall be completely sealed with tape conforming to type I, class 1 of ASTM D5486. A bag fabricated of material conforming to grade A, finish 1 of L-P-378 shall be provided. Bag shall be 16 inches long, of applicable width and 0.006 inch thick. Bag shall be installed over muzzle end of gun-launcher and secured in place with four strips of tape conforming to type I, class 1 of ASTM D5486. Tape shall run lengthwise on the gun-launcher placed at top, bottom, and each side of gun-launcher. Tape shall be 12 inches long and a minimum one inch in width, applied equally six inches onto bag and six inches onto painted surfaces of the gun-launcher. Bag shall be sealed to cannon with tape conforming to type I, class 1 of ASTM D5486. Tape shall be of applicable length, to provide a continuous seal around circumference of gun-launcher, and six inches in width. Tape shall be applied equally three inches onto bag and three inches onto painted surfaces of the gun-launcher. Two additional one inch strips of tape conforming to type I, class 1 of ASTM D5486 shall be applied at equal intervals between muzzle end of gun-launcher and area where bag is sealed to gun-launcher. Tape shall be applied completely around circumference of bag to provide additional securement of bag to gun-launcher.

3.1.14.1.2 Breech mechanism and breech coupling. All unpainted surfaces, including phosphated surfaces of the breech coupling, breech chamber, breech operating and firing mechanisms, shall be coated with grease conforming to MIL-PRF-10924.

3.1.14.2 Exercising of recoil mechanism. Prior to processing as specified in 3.1.14.2.2 and when the recoil mechanism has not been exercised, proof fired, over-hauled, or manufactured within four months prior to preparation for storage or shipment, the recoil mechanism shall be exercised a minimum of three extensions of the recoil piston. Extension shall be a minimum of six inches. Record of exercising shall be entered on DA Form 2408-4 “Weapon Record Data” and proof testing of the weapon shall be entered on DA Form 2408-9 “Proof Acceptance Record” (see 3.1.19).

3.1.14.2.1 Processing of recoil mechanism after exercising. Dust shield shall be removed and accessible surface of chrome plated recoil sleeve coated with grease conforming to MIL-PRF-10924. The surface of the recoil mechanism immediately forward of breech coupling shall be coated with the same type grease. Application of grease shall be made while gun-launcher is out of battery during exercising and upon the last extension prior to return to battery.

3.1.14.2.2 Counter recoil buffer. Without disassembly, exposed unpainted machined surfaces of the counter recoil buffer shall be cleaned, then coated with grease conforming to MIL-PRF-10924.

3.1.14.3 Exercising of replenisher. Replenisher shall be exercised coincidentally with the recoil mechanism (see 3.1.14.2).

3.1.14.3.1 Processing of replenisher after exercising. Gun-launcher shall be elevated to 15 degrees (265 mils). Reservoir oil level shall be checked and filled, to one quart mark, if required, with the specified oil.

3.1.14.4 Elevating and traversing mechanism. Exposed unpainted surfaces of elevating mechanism trunnions, and turret traversing ring gear and elevating hand crank shaft shall be coated with grease conforming to MIL-PRF-10924. Handle lock pin and turret traverse lock shall be secured in locked position.

3.1.14.5 Turret ring bearing. Plugs shall be removed from grease fitting openings in turret ring bearing and grease fittings installed. Grease conforming to MIL-PRF-10924 shall be pumped through grease fittings until grease is visible between the two sections around the circumference of the ring. The turret shall be rotated five times in both directions and again lubricated until all surfaces on the circumference of the ring are lubricated. Grease fittings shall be removed and plugs reinstalled. Excess grease shall be removed from the outside surface of the

rail. DD Form 1397 shall be marked with the information “TURRET BEARING COMPLETELY FILLED WITH GREASE - MIL-PRF-10924.”

3.1.15 Backrests and seats. Immediately after drying (see 3.1.5.1.2), backrests and cushioned components of seats shall be covered with paper, having a minimum basis weight of 60 pounds, conforming to A-A-203. Paper shall be secured in place with tape conforming to type I of A-A-883.

3.1.16 Hatches and doors. Rubber seals around hatches and doors shall be coated with powdered talc conforming to A-A-52518. Hatches and doors shall be closed and locked from the inside except that for shipment, loader’s hatch shall be secured using an approved railroad type seal placed through locking lugs. Driver’s hatch lever shall be taped in position with tape conforming to type I, class 1 of ASTM D5486.

3.1.17 Miscellaneous preservation. Except as otherwise specified herein, all exposed, unpainted machined metal surfaces on the interior of the vehicle shall be coated with preservative conforming to grade 4 of MIL-PRF-16173. All exposed, unpainted machined metal surfaces on the exterior of the vehicle, except tracks, shall be coated with preservative conforming to grade 4 of MIL-PRF-16173.

3.1.18 On vehicle equipment. Unless otherwise specified (see 6.1), all spare parts, tools and equipment shall be preserved, packaged and packed in accordance with Packaging Data Sheet 8736408. Pack shall be identified to pertinent vehicle by serial number and, except during shipment, shall be stored inside buildings.

3.1.19 Record forms. A copy of “The Equipment Log Book” consisting of Binder (FSN 7510-889-3494) with required forms, and two copies of “Processing and Deprocessing Record for Shipment, Storage and Issue of Vehicles and Spare Engines”, DD Form 1397, and single copies of DA Form 2408-4 Weapon Record Data and DA Form 2408-9 Proof Acceptance Record (see 6.3) shall be furnished and completed with each vehicle. Instructions for preparation and attachment or location of “The Equipment Log Book” shall be supplied by the Government representative. One copy of DD Form 1397 shall be placed in a bag conforming to type II, class B of MIL-B-117. Bag shall be closed by stapling, identified and secured to headlamp. The duplicate copy shall be placed in the bag with the log book.

3.1.20 Vehicle closure. Vehicle shall be provided with a vehicle protective closure kit in accordance with Drawing 11604883. The closure cover shall be fabricated, assembled and installed in accordance with figures 1 through 64 of Closure Frame and Cover Assemblies. All sharp corners of framework and bows where cloth cover will make contact, such as corners on base of the frame, shall be cushioned with a 3/4 inch minimum thickness of cushioning material conforming to A-A-1898, secured in place with tape conforming to type I, class 1 of

ASTM D5486. To lift vehicle for loading, cover shall be rolled away from front and rear bows to expose vehicle lifting eyes.

3.1.20.1 Ventilation. All access plates and gaskets on underside of vehicle shall be removed for ventilation. Unpainted metal surfaces shall be coated with preservative conforming to grade 1 of MIL-PRF-16173. Items shall be placed in a box conforming to ASTM D1974, identified and stowed within vehicle. Threaded portions exposed by removal of these items shall be coated with preservative conforming to grade 1 of MIL-PRF-16173. The following information shall be stenciled in a conspicuous location on the exterior of vehicle: "REMOVE SCREENS, INSTALL ACCESS PLATES, COVERS AND GASKETS, BEFORE VEHICLE OPERATION". Stenciling color shall be white or yellow paint conforming to MIL-P-52905. Characters shall be a minimum of 3/4 inch in height.

3.1.20.2 Screens. Screens constructed of wire cloth, 0.047 inch diameter, 4 by 4 mesh, conforming to A-A-1037 shall be installed in access cover openings. Screens shall be installed in accordance with figures 1 through 10 of Ventilation Kit.

3.1.21 Fire extinguishers. Fire extinguishers shall have a minimum of 90 percent of the rated full charge. All seals shall be intact. DA Form 253 shall be completed and securely attached to each extinguisher (see 6.2).

3.1.22 OVE saddle. Vehicle shall be provided with an OVE saddle constructed, assembled and installed in accordance with figures 1 through 23 of OVE Saddle Assembly.

3.1.23 Tow shackles. Tow shackles and related hardware shall be removed for shipment, placed in a weather resistant box conforming to ASTM D1974, sealed, identified, then stowed inside vehicle.

3.2 Level B and C. Vehicles shall be processed the same as specified for level A with the following exceptions:

3.2.1 Transmission. Transmission shall contain lubricant in accordance with applicable drawings, specifications, or lubrication order, filled to operating level; except when the unit contains preservative oil conforming to type I, grade 10, 30 or 50 as applicable, of MIL-L-21260, operating level shall be attained by the addition of the applicable grade of preservative oil. Operating lubricant and preservative oil shall not be mixed.. DD Form 1397 shall be completed to indicate grade of lubricant or preservative oil used.

3.2.2 Engine crankcase and generator drive gear box. Engine crankcase and generator drive gear box shall contain lubricant in accordance with applicable drawings, specification, lubrication order, or preservative oil conforming to type I, grade 10, 30 or 50 as applicable of

MIL-L-21260, filled to operating level. Operating lubricant and preservative oil shall not be mixed. DD Form 1397 shall be completed to indicate grade of lubricant or preservative oil used.

3.2.2.1 Engine preservation. Engine preservation shall be in accordance with 3.1.9.3 and 3.1.9.4 only.

3.2.3 Fuel tank. Unless otherwise specified (see 6.1), vehicles shall be shipped without draining residual fuel from the fuel tank.

3.2.4 Hatches and doors. Hatches and doors shall be closed and locked from the inside except that for shipment, loader's hatch shall be secured using an approved railroad type seal placed through locking lugs.

3.3 All levels.

3.3.1 Loading. Vehicles shall be blocked, braced and anchored on open top railroad cars in accordance with the Association of American Railroads publications (see 2.2) and Drawing 10954899. Parking brake shall be set and secured in that position.

3.3.2 Reprocessing engine after loading. If engine is operated in connection with loading, or moving vehicle to loading area, the engine shall be reprocessed as specified in 3.1.9 or 3.2.2.1 as applicable. An auxiliary fuel tank shall supply the fuel. If installed, vehicle cover shall be rolled away from the first two front and first two rear bow sections. After reprocessing of engine, vehicle cover shall be restored to its original position.

3.3.3 Marking. In addition to any special marking required in the contract or order (see 6.1), vehicles shall be marked in accordance with MIL-STD-129.

3.3.3.1 Lifting points. Information, "LIFT HERE" shall be stenciled adjacent to each lifting eye, using white enamel conforming to TT-E-529. Stenciling shall be in characters a minimum of 3/4 inch high.

3.3.3.2 Closure marking. The information 'TO LIFT VEHICLE FOR LOADING, UNFASTEN AND ROLL COVER FROM FRONT AND REAR BOWS EXPOSING LIFTING EYES", shall be stenciled in a conspicuous location on the front and rear of vehicle closure, using white enamel conforming to TT-E-529. Stenciling shall be in characters a minimum of 3/4 inch high. The information "CLOSURE KIT, VEHICLE PROTECTIVE - M551 - DO NOT DESTROY - REINSTALL FOR SHIPMENT OR STORAGE - OR SHIP WITH OVE", shall be stenciled in a conspicuous location on one end and one side of vehicle closure, using white enamel conforming to TT-E-529. Stenciling shall be in characters a minimum of two inches high.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the supplier may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.2 First production processed and one of the next 10 production processed vehicles. The first production processed vehicle (see 3.1.1) and one of the next 10 production processed vehicles (see 3.1.2) shall be subjected to inspection specified in 4.5 through 4.5.2.5.

4.3 Production processed vehicles. Except as otherwise specified, all production processed vehicles shall be subjected to inspection specified in 4.5 through 4.5.2.3.

4.4 Rejection. Failure of the first production, one of the next 10, or any production processed vehicle to conform to the requirements of this specification shall be cause for rejection of the vehicle, the refusal to continue acceptance of vehicles, by the Government, until objective evidence has been provided, by the contractor, that corrective action has been taken to eliminate the conditions which caused rejection.

4.5 Quality conformance inspection.

4.5.1 Materials. Except for materials which have been Government inspected at the source, all materials to be used in processing of vehicles shall be inspected in accordance with the material specification; or certified inspection and laboratory test reports shall be furnished which show that materials, as furnished, conform to the detailed specification.

4.5.2 Processing. All vehicle processing shall be inspected to determine conformance to this specification. Inspection of processing shall include all items specified in table I, and 4.5.2.1 through 4.5.2.3.

TABLE I. Processing inspection.
(See indicated paragraphs for level A, level B, and level C requirements)

	Cleaning	Preservation		Packaging
	Levels A, B & C	Level A	Levels B & C	Levels A, B & C
Preparation prior to processing				3.1.4
Processing records				3.1.4.1
Disassembly				3.1.4.2
Matchmarking				3.1.4.2.1
Interior or vehicle	3.1.5.1			
Battery supports & retainers	3.1.5.1.1	3.1.5.1.1	3.1.5.1.1	
Backrests & seats	3.1.5.1.2			3.1.15
Fire control items	3.1.5.1.3	3.1.13.1	3.1.13.1	3.1.13.1
Fuel filters	3.1.5.1.4			
Exterior of vehicle	3.1.5.2			
Gun-launcher	3.1.5.2.1	3.1.14.1	3.1.14.1	
Relubrication		3.1.6	3.1.6	
*Transmission		3.1.7	3.2.	
*Engine crankcase & generator drive gear box		3.1.8	3.2.2	
*Engine preservation		3.1.9	3.2.2.1	
Preservation through fuel system		3.1.9.1	3.1.9.1	
Preservation through combustion chamber		3.1.9.2	3.1.9.2	
Preservation through air intake & exhaust system		3.1.9.3	3.2.2.1	
Preservation through dipstick shroud opening		3.1.9.4	3.2.2.1	
Fuel tank		3.1.10	3.2.3	
*Cooling system		3.1.11	3.1.11	
Water & antifreeze procedure		3.1.11.1	3.1.11.1	
Antifreeze compound procedure		3.1.11.2	3.1.11.2	
Water & corrosion inhibitor procedure		3.1.11.3	3.1.11.3	
Dry charge batteries & cables				3.1.12.1
Electrolyte				3.1.12.2
Gun-launcher		3.1.14.1	3.1.14.1	
Muzzle plug		3.1.14.1.1	3.1.14.1.1	
Breech mechanism & breech coupling		3.1.14.1.2	3.1.14.1.2	
**Exercising of recoil mechanism		3.1.14.2	3.1.14.2	
Processing of recoil mechanism after exercising		3.1.14.2.1	3.1.14.2.1	
Counter recoil buffer		3.1.14.2.2	3.1.14.2.2	
Processing of replenisher after exercising		3.1.14.3.1	3.1.14.3.1	

TABLE I. Processing inspection - Continued.
(See indicated paragraphs for level A, level B, and level C requirements)

	Cleaning	Preservation		Packaging
	Levels A, B & C	Level A	Levels B & C	Levels A, B & C
Elevating & traversing mechanism		3.1.14.4	3.1.14.4	
Turret ring bearing		3.1.14.5	3.1.14.5	
Hatches & doors		3.1.16	3.2.4	
Miscellaneous preservation		3.1.17	3.1.17	
On vehicle equipment		3.1.18	3.1.18	3.1.18
Record forms				3.1.19
Vehicle closure				3.1.20
Ventilation		3.1.20.1	3.1.20.1	3.1.20.1
Screens				3.1.20.2
Fire extinguishers				3.1.21
OVE saddle				3.1.22
Tow shackles				3.1.23
Loading				3.3.1
Reprocessing engine after loading		3.3.2	3.3.2	
Marking				3.3.3
Lifting points				3.3.3.1
Closure marking				3.3.3.2

*NOTE: Inspect DD Form 1397
**NOTE: Inspect DA Form 2408-4 and DA Form 2408-9

4.5.2.1 Cleaning. To determine conformance to 3.1.5.1, interior of vehicles shall be examined for cleanliness, and one vehicle each day shall be tested for cleanliness in accordance with the applicable provisions of MIL-STD-2073-1. To determine conformance to 3.1.5.2, exterior of vehicle shall be examined for cleanliness. Surfaces to which tape is to be applied shall be examined for cleanliness before applying tape.

4.5.2.2 Fuel tank. To determine conformance to 3.1.10, interior of fuel tank shall be examined and visual inspection shall assure that complete processing, as specified, has been accomplished.

4.5.2.3 Gun-launcher. Gun-launcher shall be examined to determine condition and effectiveness of processing. When reprocessing has been accomplished, it shall be examined for conformance to 3.1.5.2.1 and 3.1.14.1.

4.5.2.4 Cooling system. To determine conformance to 3.1.11.1, one vehicle from each day's production shall be selected at random and engine coolant tested using an antifreeze tester conforming to MIL-T-37402, with a range of -60°F to plus (+) 160°F.

4.5.2.5 Engine. To determine conformance to 3.1.9, interior of engine from the first production processed vehicle and one of the next ten production processed vehicles shall be examined for surface coverage. Engine shall be disassembled to extent necessary to permit visual examination of all surfaces within the combustion chamber. (NOTE: The combustion chamber shall be considered as all surfaces within the cylinder, from the including the crown of the piston, to and including the surface of the head within the cylinder). All surfaces within the combustion chamber shall have a "wet" coating of the preservative oil such as obtained when the item is dipped or flushed with the preservative oil. The processing method of the approved preserved engine shall be submitted in writing for production on all subsequent engines.

5. PACKAGING

This section is not applicable to this specification.

6. NOTES

6.1 Acquisition requirements. Acquisition documents should specify the following:

a. Title, number, and date of this specification.
b. Selection of applicable level of processing (see 1.2).
c. If inspection of the first production processed vehicle is required (see 3.1.1).
d. Selection of applicable procedure of protection of cooling system (see 3.1.11).
e. If processing of any vehicle equipment is other than specified (see 3.1.18).
f. If draining of residual fuel from fuel tanks is required (see 3.2.3).
g. If special marking is required (see 3.3.3).

6.2 Safety precautions. Caution should be exercised in handling carbon dioxide (CO_2) fire extinguisher cylinders. Cylinders should not be dropped, permitted to strike each other, or be handled roughly. Extreme care should be exercised during the reinstallation operation to avoid tripping fire extinguisher control system (see 3.1.21).

6.3 Forms. A copy of "The Equipment Log Book" and all required forms will be furnished by the contractor for the Government at least 30 days before shipment of the equipment as required by the contract delivery schedule (see 3.1.19).

FIG. NO.	NOMENCLATURE	QTY REQD
2	MATERIAL LIST	--
3	CLOSURE FRAME ASSEMBLY	--
4	FRAME ASSEMBLY-PLAN VIEW	--
5	FRAME ASSEMBLY-LEFT ELEVATION	--
6	FRAME ASSEMBLY-FRONT ELEVATION	--
7	FRAME ASSEMBLY-REAR ELEVATION	--
8	CORNER PLATE (WELDMENT)	4
8A	PLATE	4
8B	TUBE	4
9	BOW SECTION	2
10	BOW SECTION	2
11	BOW SECTION	2
12	BOW SECTION	5
13	BOW SECTION	5
14	BOW SECTION	2
15	BOW SECTION	1
16	BEAM, FRAME	2
17	BEAM, FRAME	2
18	BEAM, FRAME	2
19	BEAM, FRAME	1
20	BEAM, FRAME	1
21	KNEE BRACE	4
22	“U” CLAMP	7
23	PLATE	7
24	SUPPORT, FRAME	2
25	CONNECTOR, BEAM	4
26	FASTENER (SEE DRAWING 10922144)	36
27	BRACE, FRAME SUPPORT	4
28	BRACKET	4
28A	PAD	4
29	HARDWARE, CLOSURE FRAME ASSEMBLY. SEE HARDWARE LIST	

FIGURE 1. Parts list - closure frame assembly.

DESCRIPTION	QTY REQD
10D x .065 WALL THICKNESS, TUBE, STEEL	130 FEET LONG
2 x 4 WOOD (COMMERCIAL SIZE)	61 FEET LONG
1 1/4 OD x .109 WALL THICKNESS, TUBE, STEEL	15 INCHES LONG
.187 STEEL PLATE, 8 INCHES WIDE	42 INCHES LONG
4 x 3 x 1/4 ALUMINUM ANGLE	9 INCHES LONG
.250 DIA, ROD, STEEL	54 INCHES LONG
.187 STEEL STRIP, 1 1/2 WIDE	75 INCHES LONG
1/8 STEEL STRIP, 1 WIDE	24 INCHES LONG
.76 x 1.62 WOOD	25 INCHES LONG

FIGURE 2. Material list - closure frame assembly.

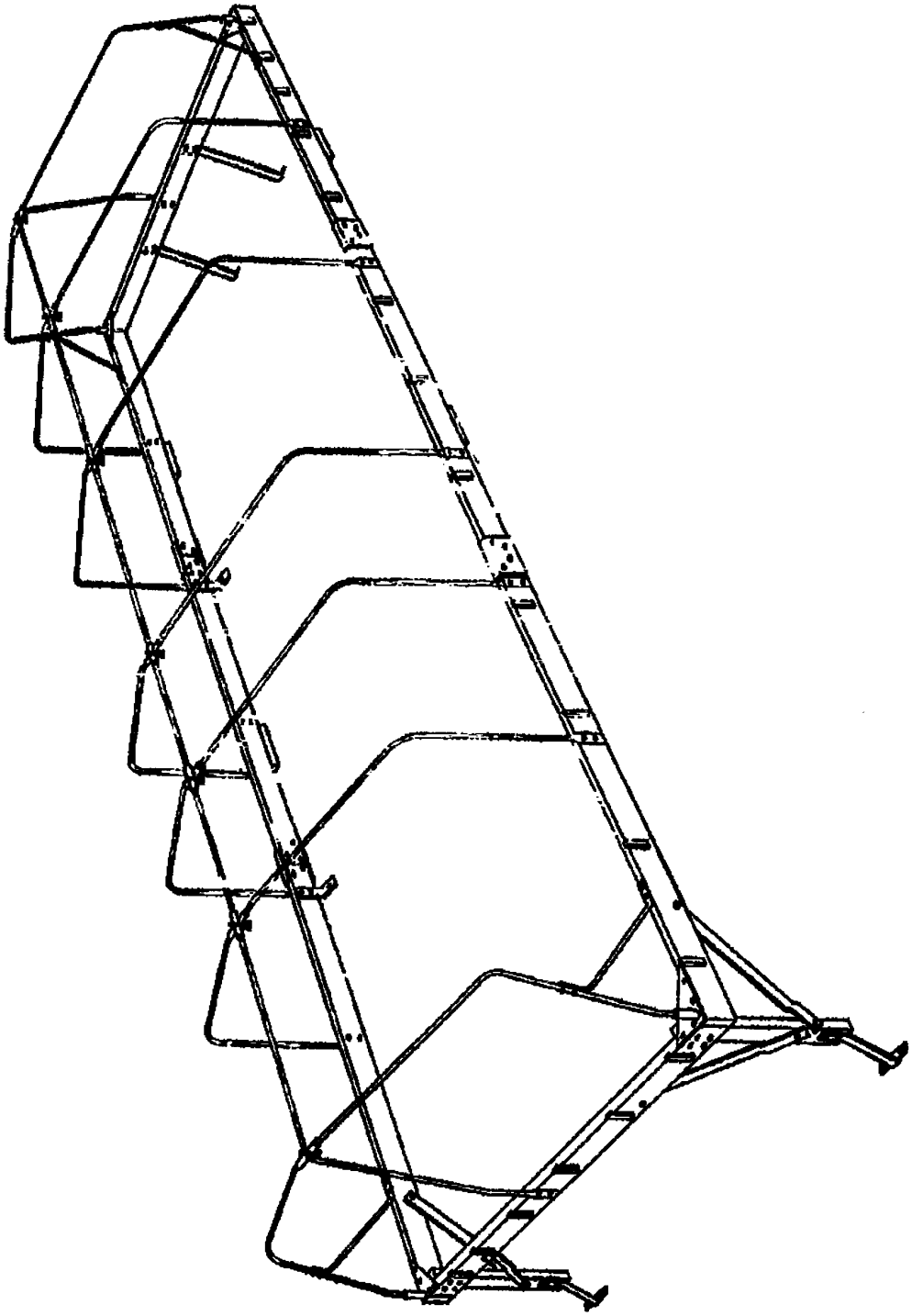


FIGURE 3. Closure frame assembly with installation brackets (perspective view).

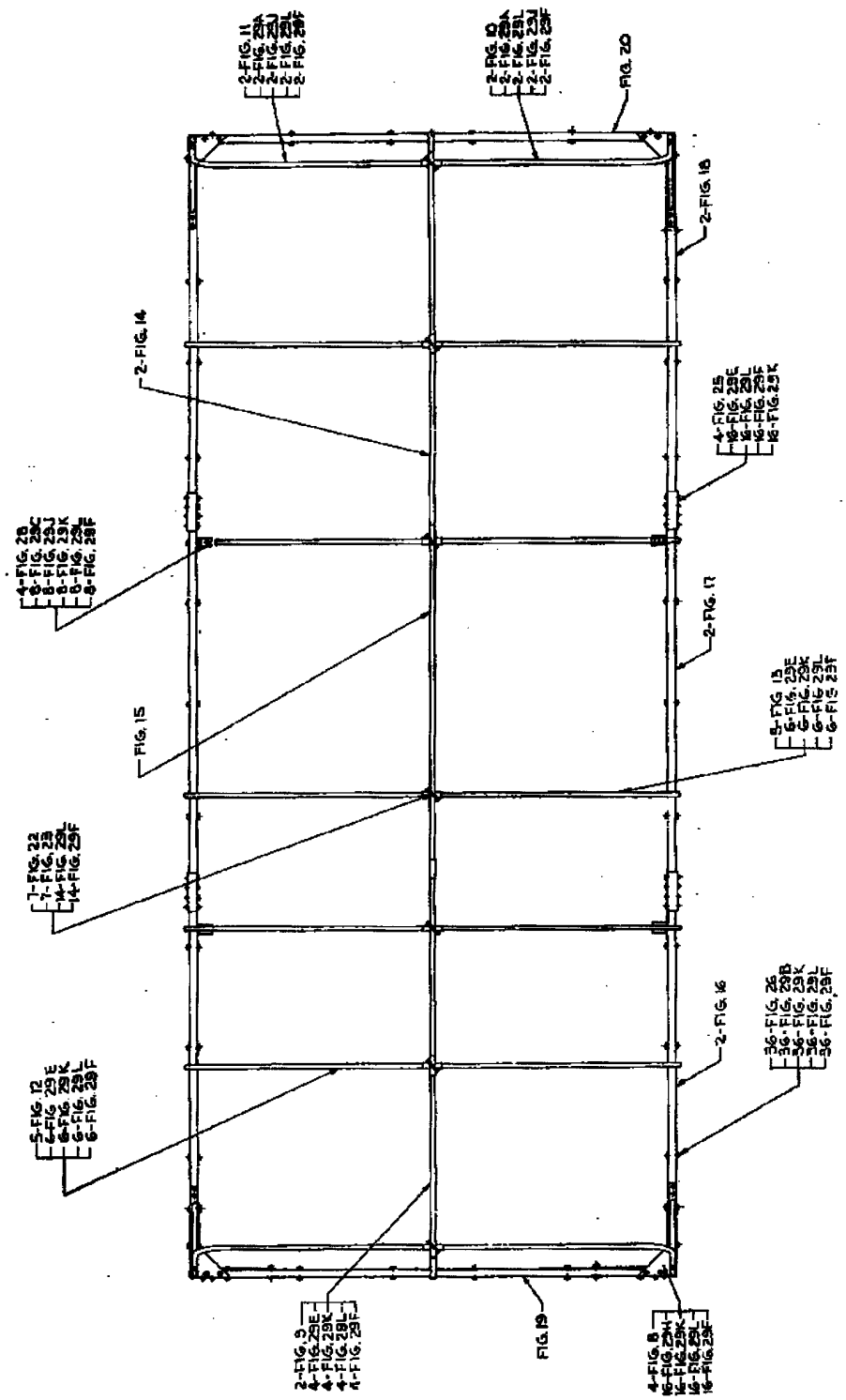


FIGURE 4. Frame assembly- plan view.

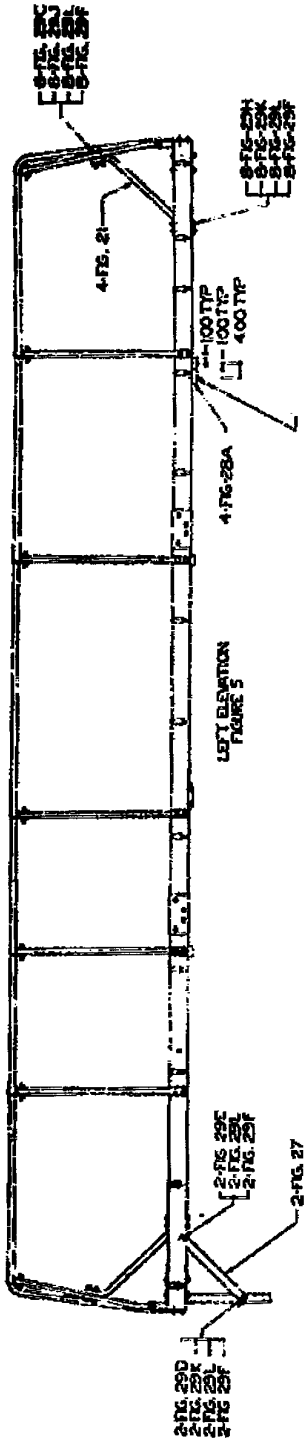


FIGURE 5. Frame assembly- left elevation

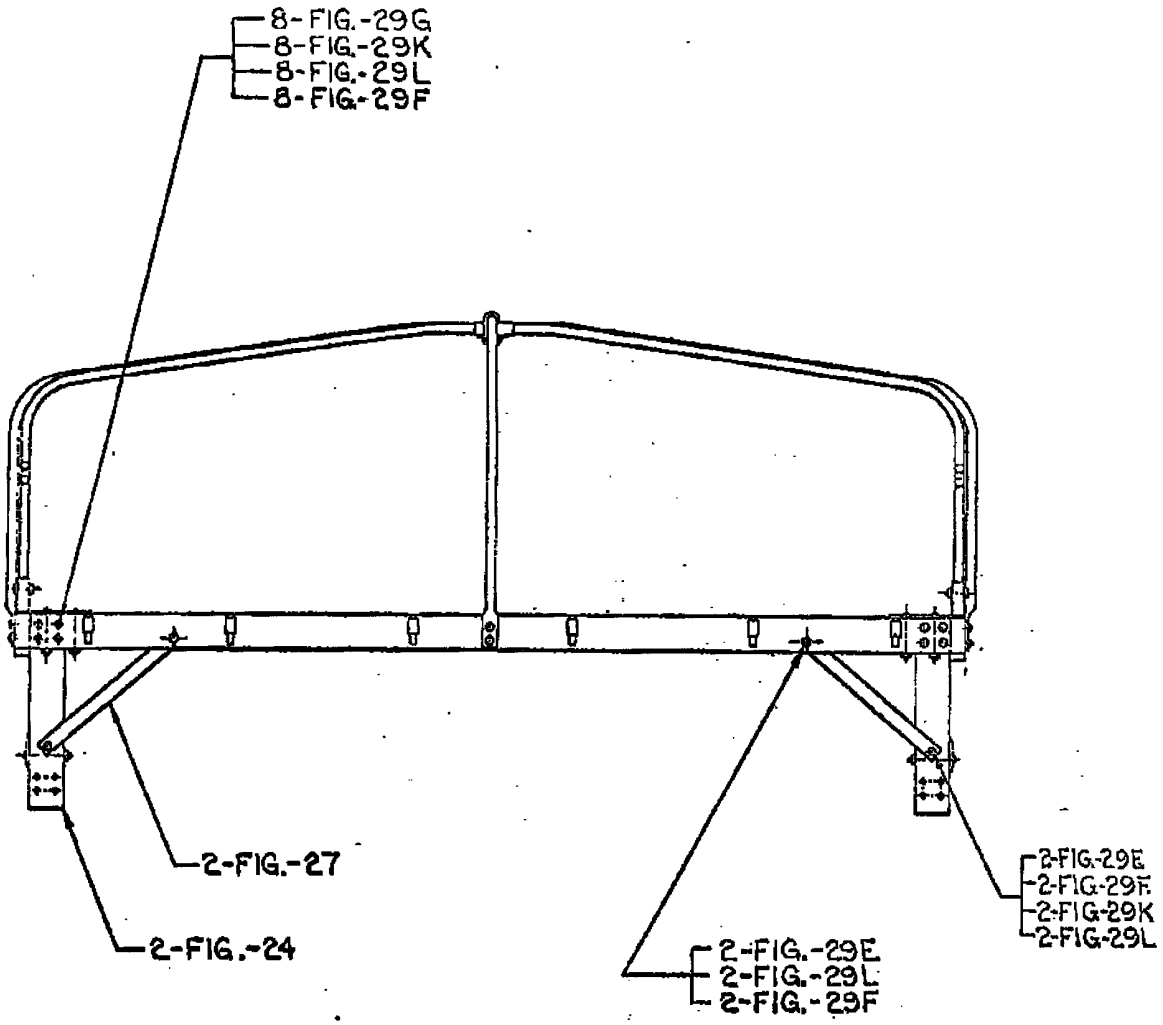


FIGURE 6. Front elevation.

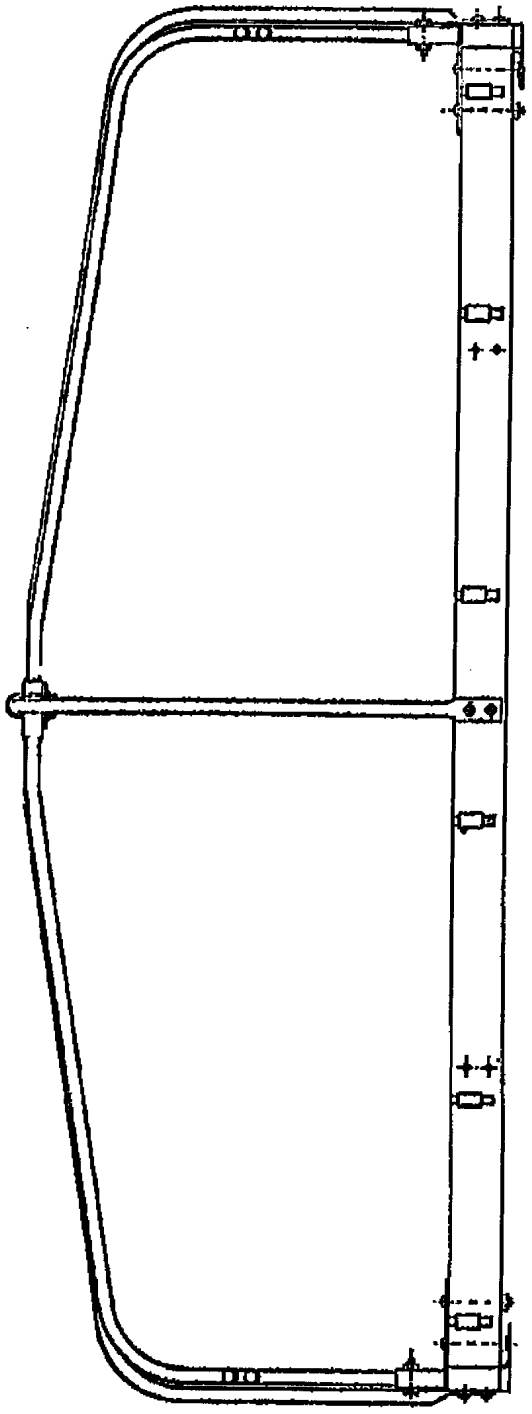
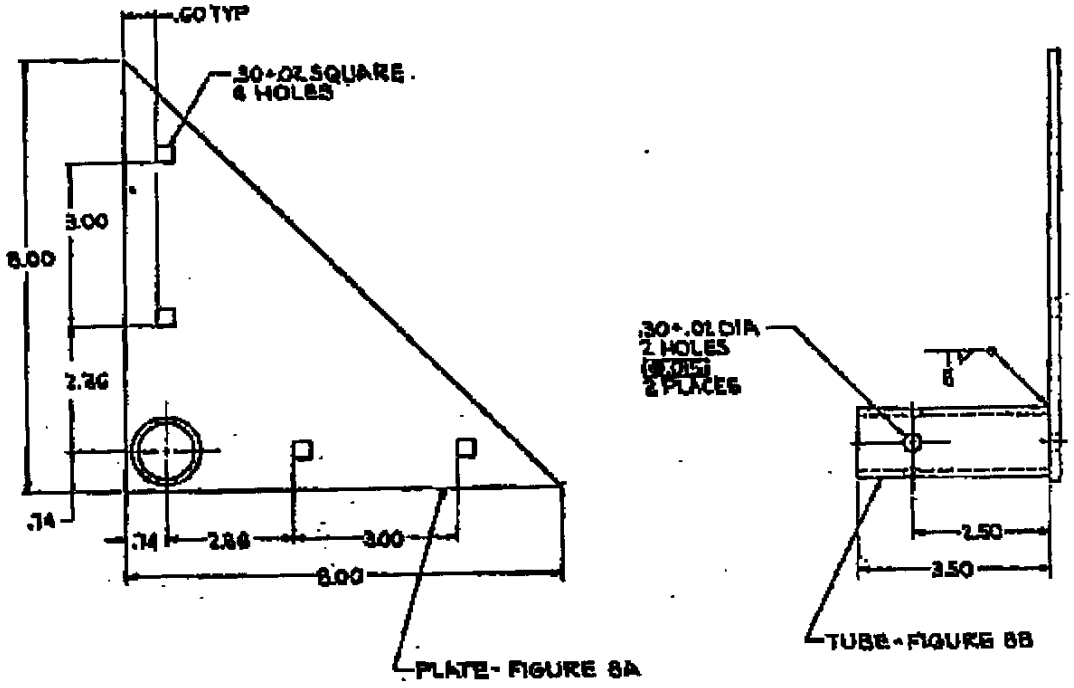


FIGURE 7. Frame assembly- rear elevation

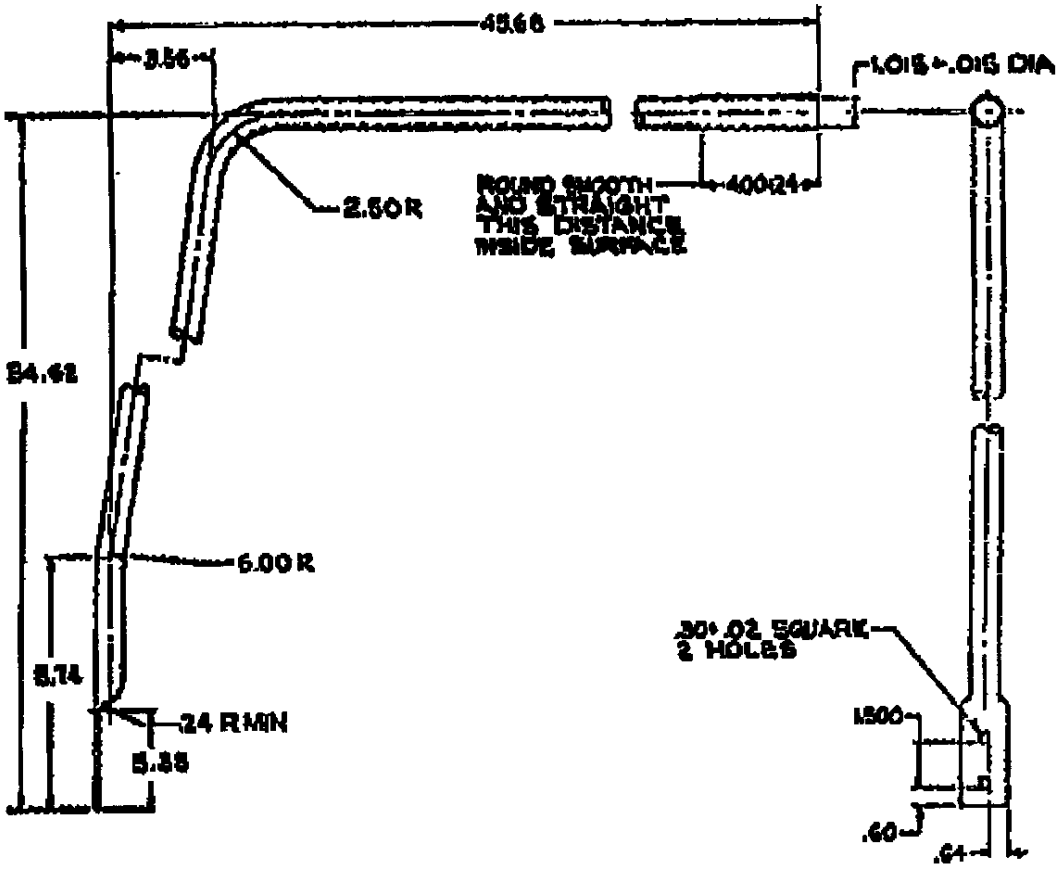


FINISH NOTE
TREAT PER TYPE I OR III
SPEC TT-C-490 PRIME PER
SPEC MIL-P-53030
ENAMEL O.D.
SPEC TT-E-529 OR TT-E-485

MUST BE FREE OF BURRS AND SHARP EDGES.

MATERIAL NOTE - TUBE, CARBON, STEEL IN ACCORDANCE WITH ASTM A513 AND ASTM A519, 1 ¼ OD BY 0.109 WALL THICKNESS. PLATE, CARBON, STEEL, HRCQ, CR, TEMPER OPTIONAL, SPEC QQ-S-698, 0.179 THICK.

FIGURE 8. Corner plate (weldment).

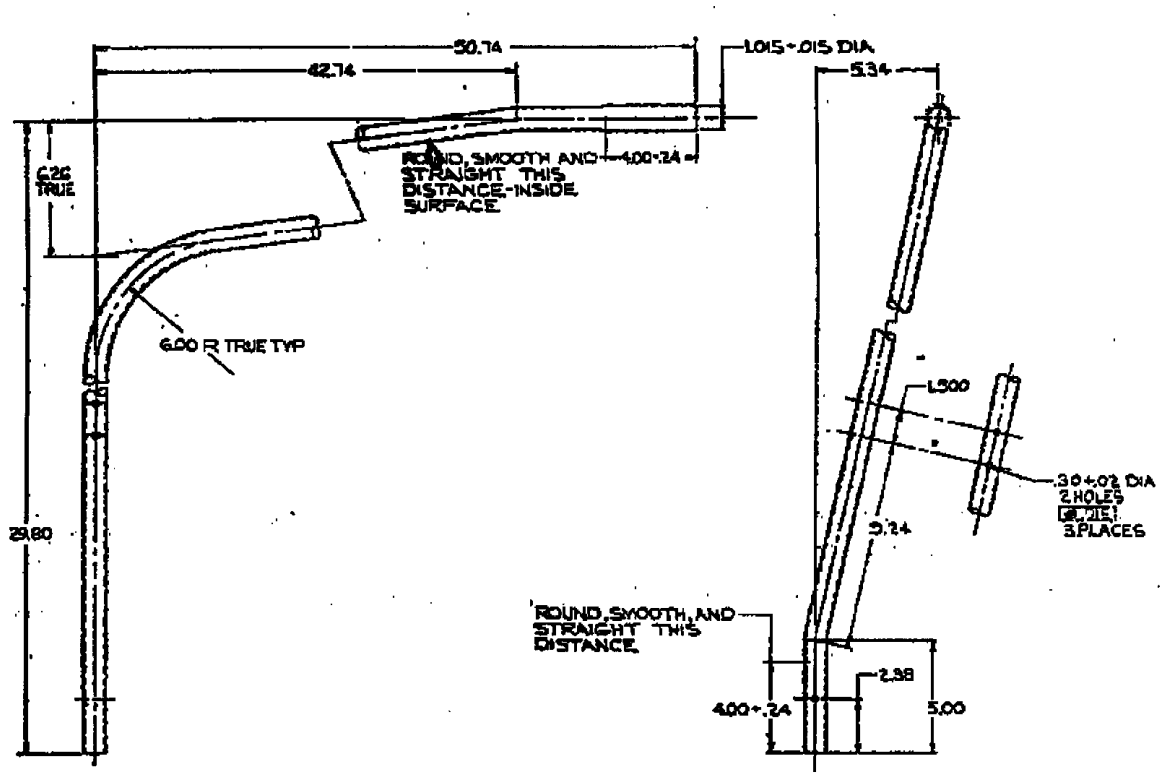


DEVELOPED LENGTH 73 APPROX.

FINISH NOTE
TREAT PER TYPE I OR III
SPEC TT-C-490 PRIME PER
SPEC MIL-P-53030
ENAMEL O.D.
SPEC TT-E-529 OR TT-E-485
MUST BE FREE OF BURRS AND SHARP EDGES.

MATERIAL NOTE - TUBE, CARBON, STEEL IN ACCORDANCE WITH ASTM A513 AND ASTM A519, 100 BY 0.065 WALL THICKNESS.

FIGURE 9. Bow section.



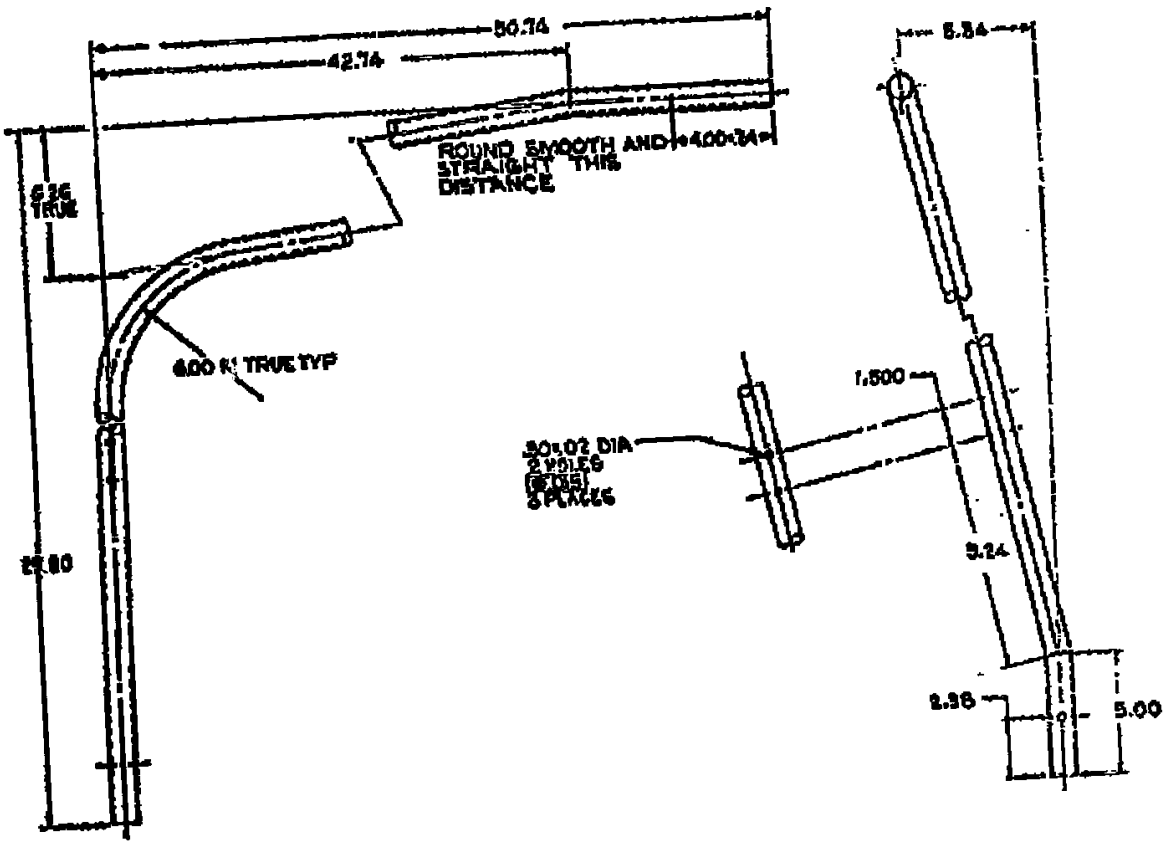
DEVELOPED LENGTH 73.74 APPROX.

FINISH NOTE
TREAT PER TYPE I OR III
SPEC TT-C-490 PRIME PER
SPEC MIL-P-53030
ENAMEL O.D.
SPEC TT-E-529 OR TT-E-485

MUST BE FREE OF BURRS AND SHARP EDGES.

MATERIAL NOTE - TUBE, CARBON, STEEL IN ACCORDANCE WITH ASTM A513 AND ASTM A519, 100 BY 0.065 WALL THICKNESS.

FIGURE 10. Bow section.



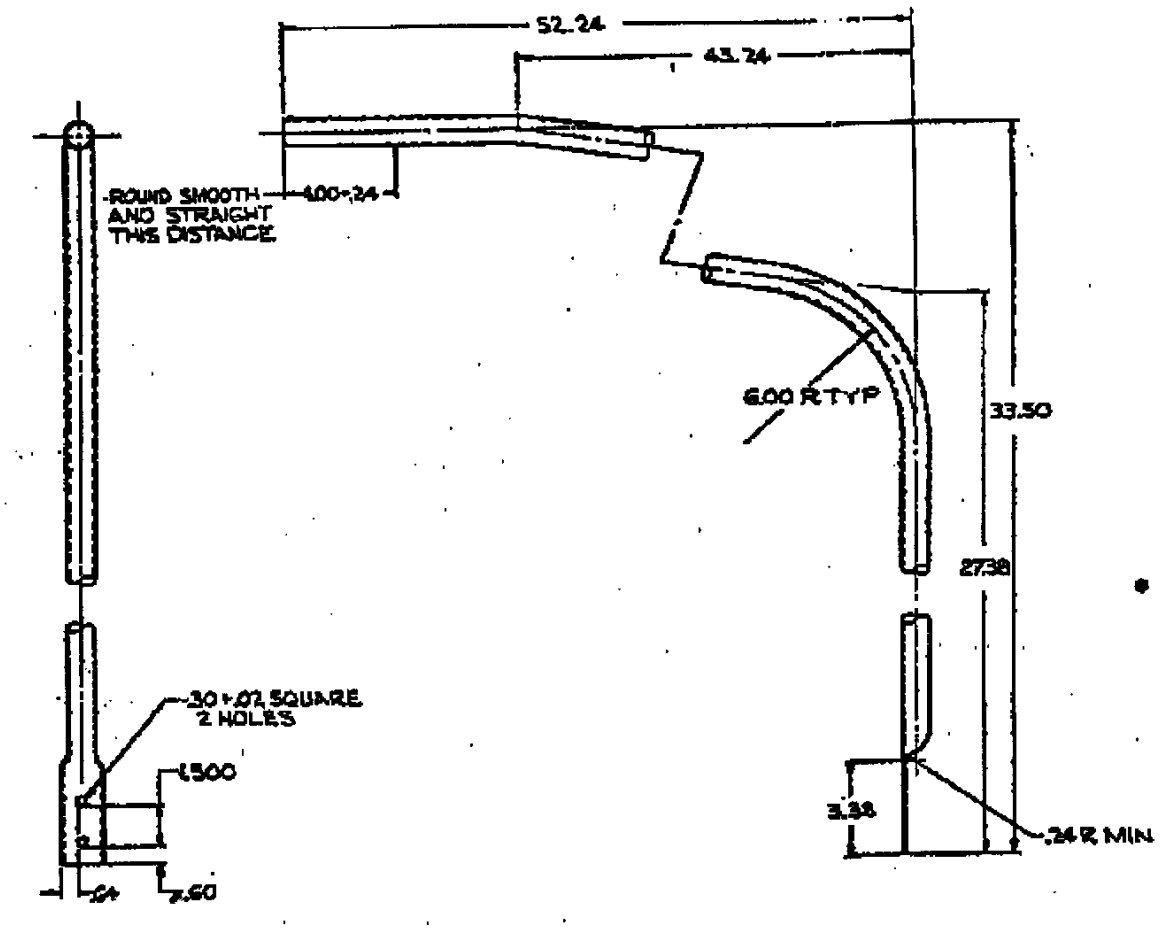
DEVELOPED LENGTH 73.74 APPROX.

FINISH NOTE
TREAT PER TYPE I OR III
SPEC TT-C-490 PRIME PER
SPEC MIL-P-53030
ENAMEL O.D.
SPEC TT-E-529 OR TT-E-485

MUST BE FREE OF BURRS AND SHARP EDGES.

MATERIAL NOTE - TUBE, CARBON, STEEL IN ACCORDANCE WITH ASTM A513 AND ASTM A519, 100 BY 0.065 WALL THICKNESS.

FIGURE 11. Bow section.



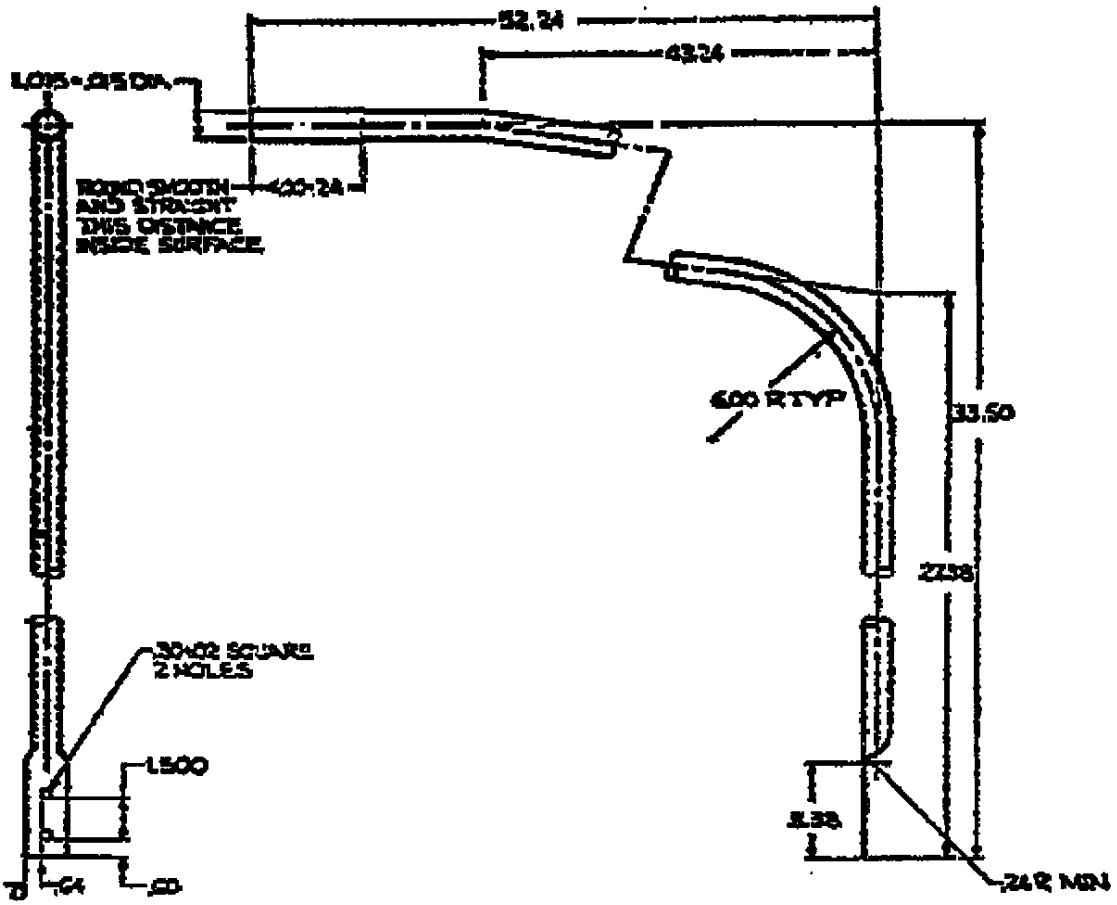
DEVELOPED LENGTH 78.32 APPROX.

FINISH NOTE
TREAT PER TYPE I OR III
SPEC TT-C-490 PRIME PER
SPEC MIL-P-53030
ENAMEL O.D.
SPEC TT-E-529 OR TT-E-485

MUST BE FREE OF BURRS AND SHARP EDGES.

MATERIAL NOTE - TUBE, CARBON, STEEL IN ACCORDANCE WITH ASTM A513 AND ASTM A519, 100 BY 0.065 WALL THICKNESS.

FIGURE 12. Bow section.



DEVELOPED LENGTH 78.32 APPROX.

FINISH NOTE
TREAT PER TYPE I OR III
SPEC TT-C-490 PRIME PER
SPEC MIL-P-53030
ENAMEL O.D.
SPEC TT-E-529 OR TT-E-485

MUST BE FREE OF BURRS AND SHARP EDGES.

MATERIAL NOTE - TUBE, CARBON, STEEL IN ACCORDANCE WITH ASTM A513 AND ASTM A519, 100 BY 0.065 WALL THICKNESS.

FIGURE 13. Bow section.

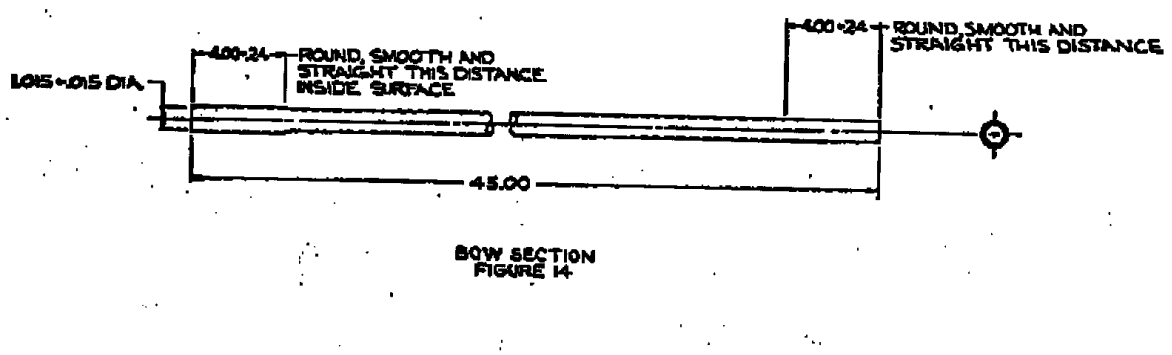


FIGURE 14. Bow section.

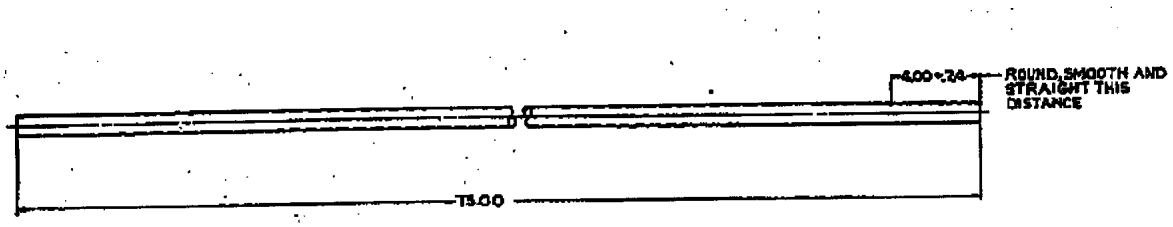
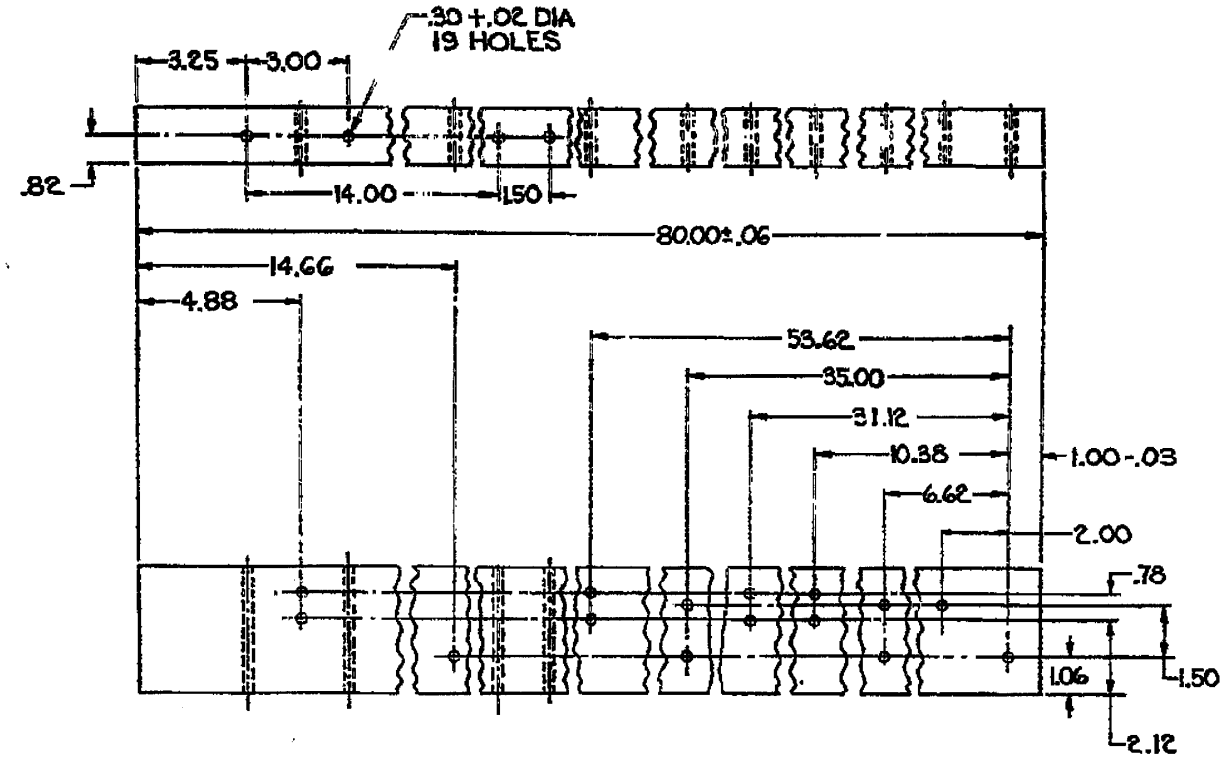


FIGURE 15. Bow section.

FINISH NOTE
TREAT PER TYPE I OR III
SPEC TT-C-490 PRIME PER
SPEC MIL-P-53030
ENAMEL O.D.
SPEC TT-E-529 OR TT-E-485

MUST BE FREE OF BURRS AND SHARP EDGES.

MATERIAL NOTE - TUBE, CARBON, STEEL IN ACCORDANCE WITH ASTM A513 AND ASTM A519, 100 BY 0.065 WALL THICKNESS.



FINISH NOTE
TREAT PER ACCEPTABLE
COMMERCIAL STDS
PRIME PER MIL-P-53030
ENAMEL COLOR OD X 24087
PER SPEC TT-E-529
MATERIAL NOTE
WOOD PER A-A-52520
COMMERCIAL SIZE 2 X 4

FIGURE 16. Beam, frame.

FINISH NOTE
TREAT PER ACCEPTABLE
COMMERICIAL STDS
PRIME PER MIL-P-53030
ENAMEL COLOR OD X 24087
PER SPEC TT-E-529
MATERIAL NOTE
WOOD PER A-A-52520
COMMERCIAL SIZE 2 X 4

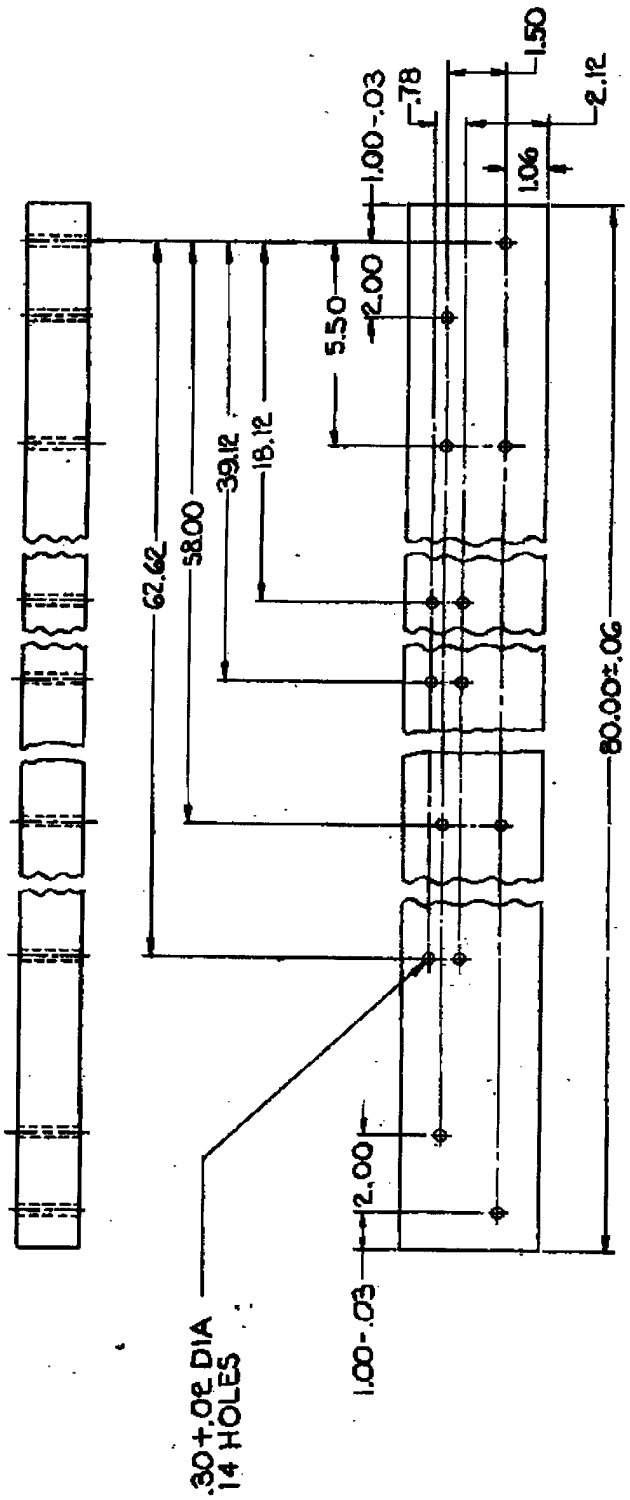


FIGURE 17. Beam, frame.

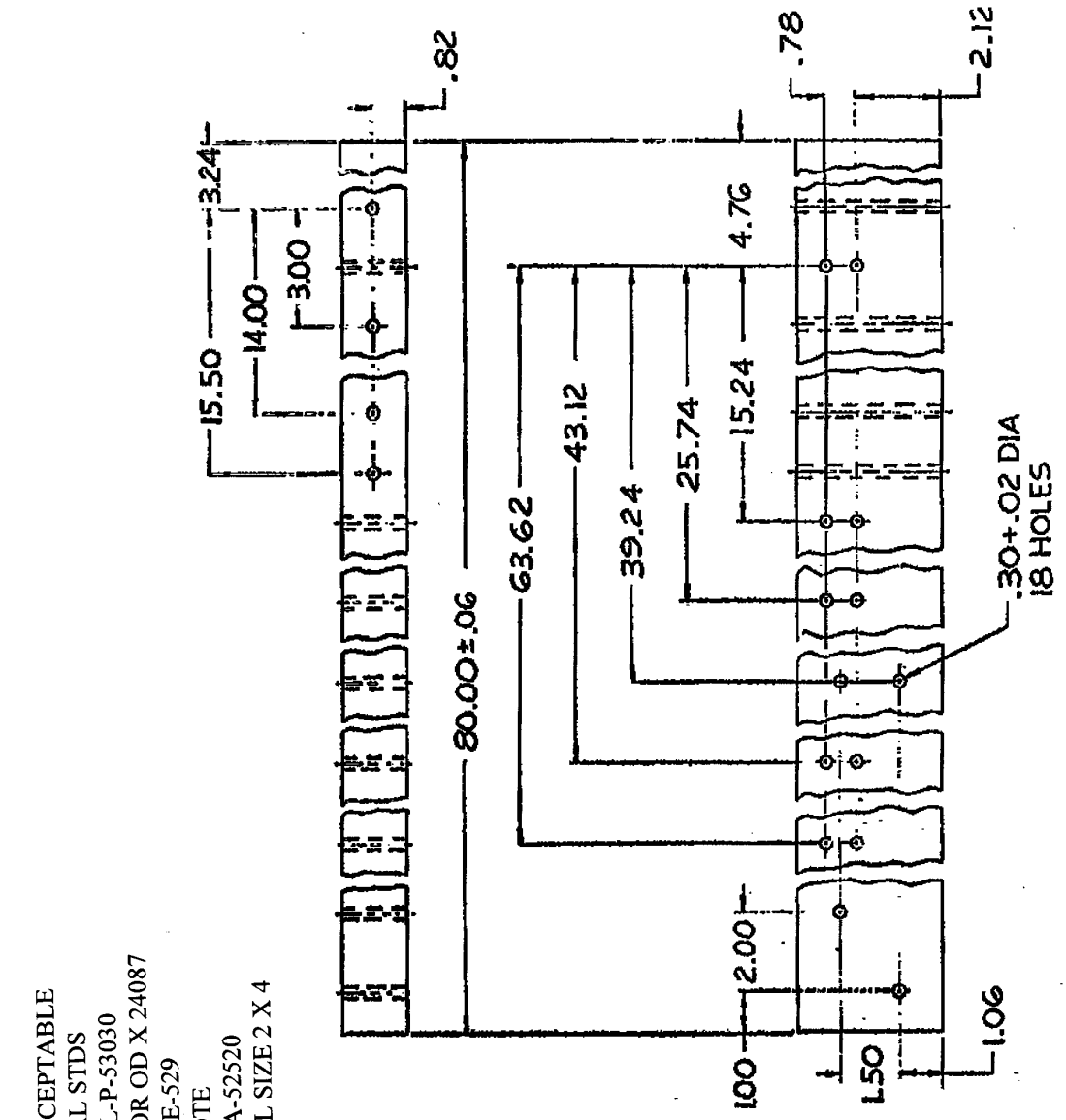


FIGURE 18. Beam, frame.

FINISH NOTE
TREAT PER ACCEPTABLE
COMMERICIAL STDS
PRIME PER MIL-P-53030
ENAMEL COLOR OD X 24087
PER SPEC TT-E-529
MATERIAL NOTE
WOOD PER A-A-52520
COMMERCIAL SIZE 2 X 4

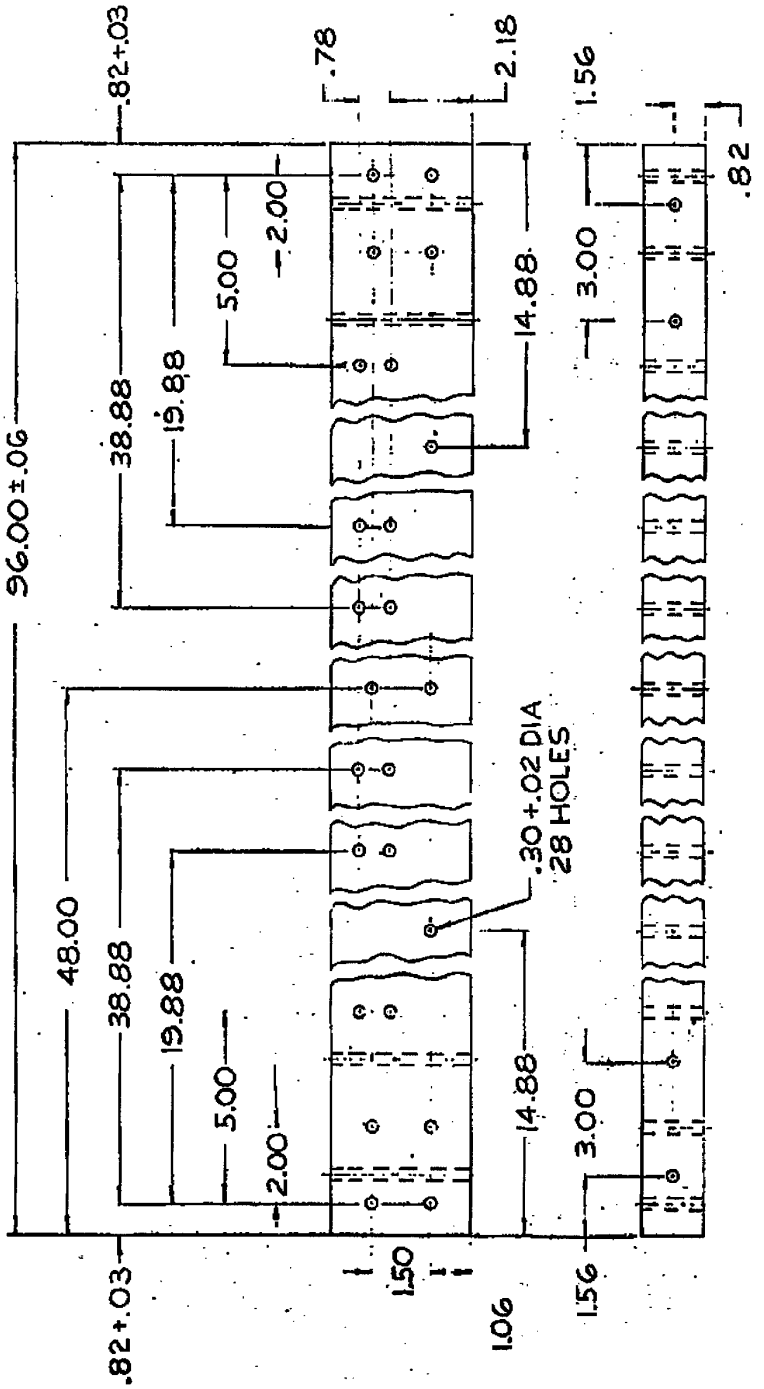


FIGURE 19. Beam, frame.

FINISH NOTE
TREAT PER ACCEPTABLE
COMMERICIAL STDS
PRIME PER MIL-P-53030
ENAMEL COLOR OD X 24087
PER SPEC TT-E-529
MATERIAL NOTE
WOOD PER A-A-52520
COMMERCIAL SIZE 2 X 4

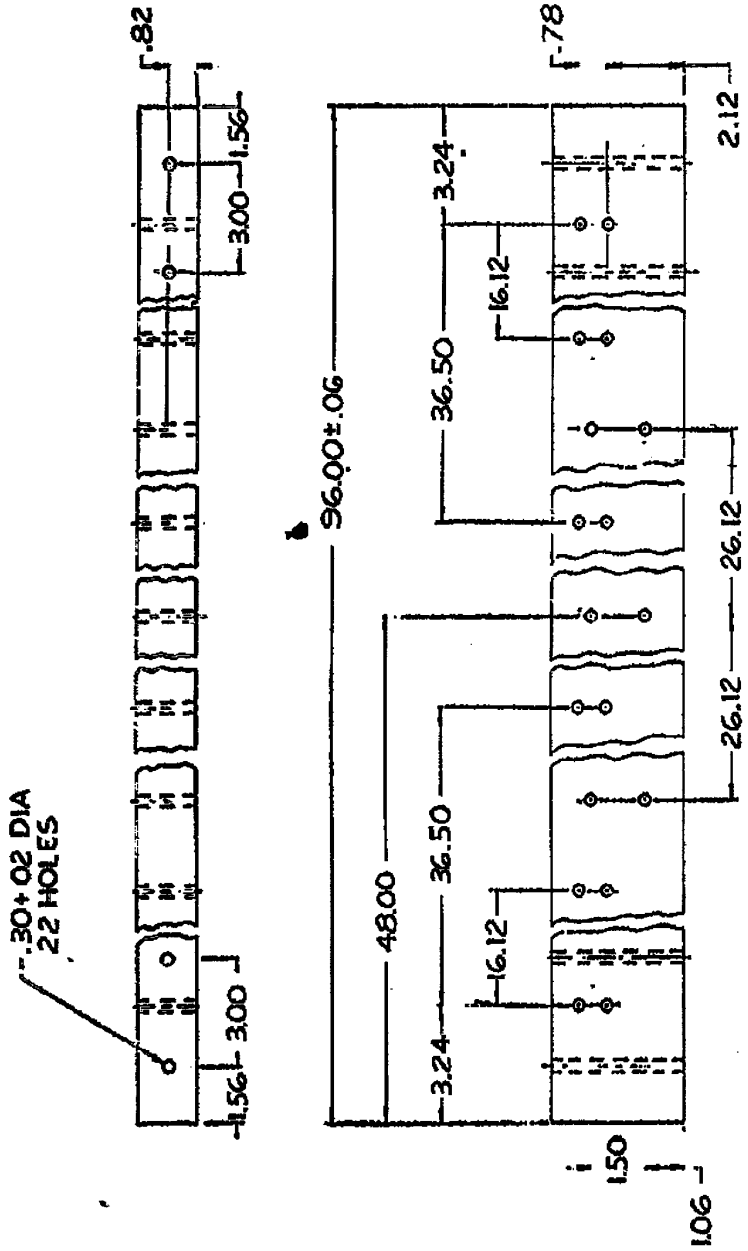
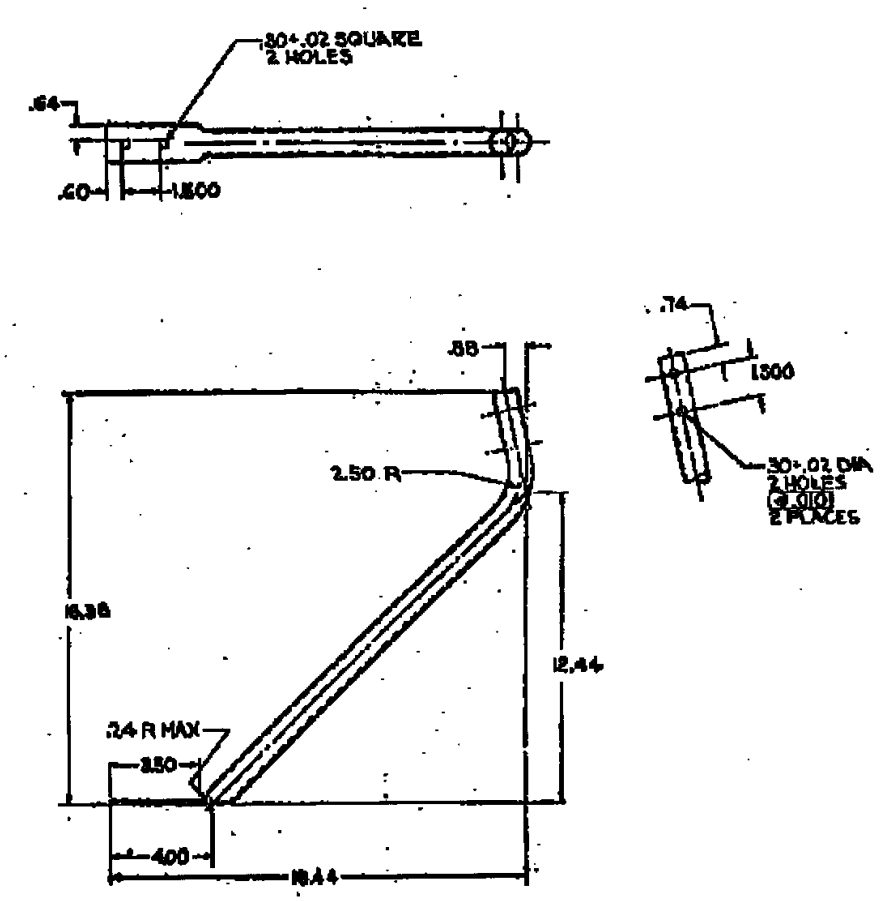


FIGURE 20. Beam, frame.



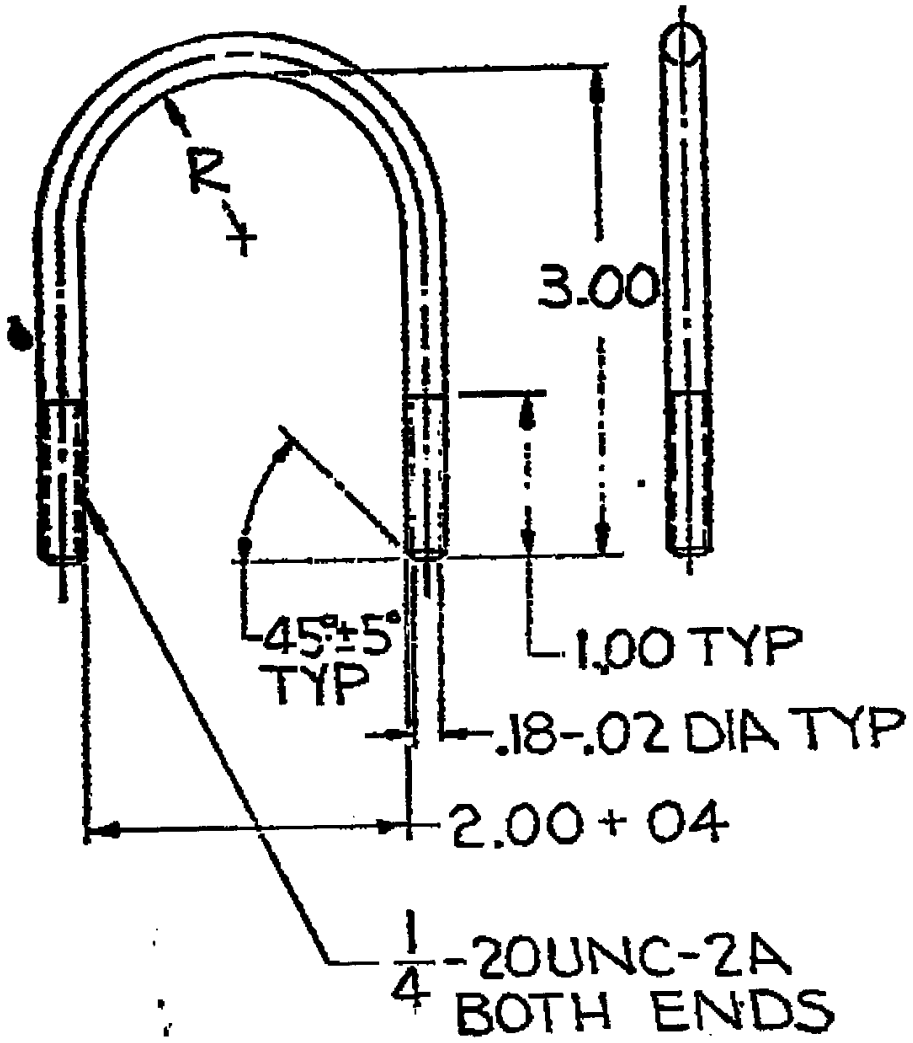
DEVELOPED LENGTH APPROX. 25.74

FINISH NOTE
TREAT PER TYPE I OR III
SPEC TT-C-490 PRIME PER
SPEC MIL-P-53030
ENAMEL O.D.
SPEC TT-E-529 OR TT-E-485

MUST BE FREE OF BURRS AND SHARP EDGES.

MATERIAL NOTE - TUBE,, CARBON, STEEL IN ACCORDANCE WITH ASTM A513 AND ASTM A519, 100 BY 0.065 WALL THICKNESS.

FIGURE 21. Knee brace.



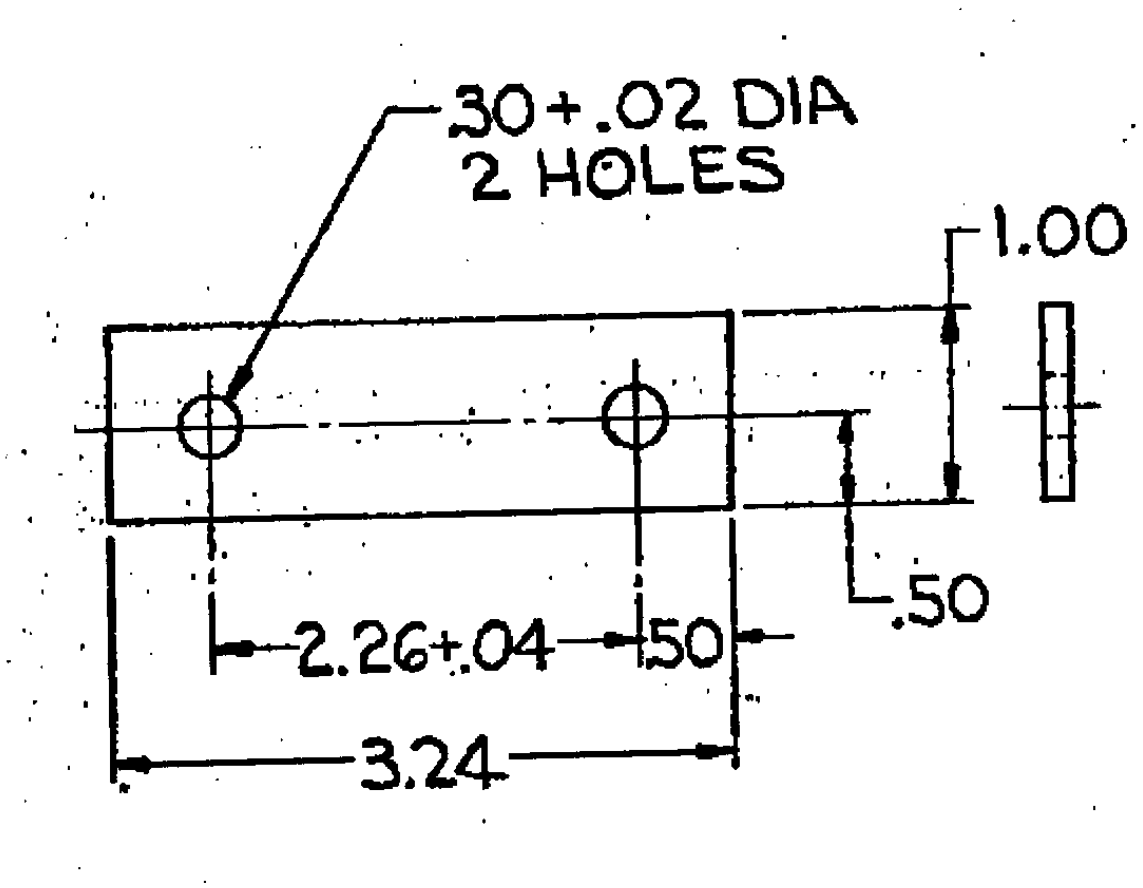
FINISH NOTE

ZINC, IN ACCORDANCE WITH
CLASS 3, TYPE I, ASTM B633

OPTIONAL MATERIAL
STEEL, CARBON,
IN ACCORDANCE WITH ASTM A578, ASTM A663

MATERIAL NOTE
WIRE, STEEL, 0.25 DIA, IN ACCORDANCE WITH ASTM A853, ASTM A818, OR ASTM A641

FIGURE 22. U clamp.



FINISH NOTE
ZINC
SPEC

MATERIAL NOTE
STEEL, CARBON
HRCQ, P & O OR CRCQ
SPEC QQ-S-698
0.120 THICK

FIGURE 23. Plate.

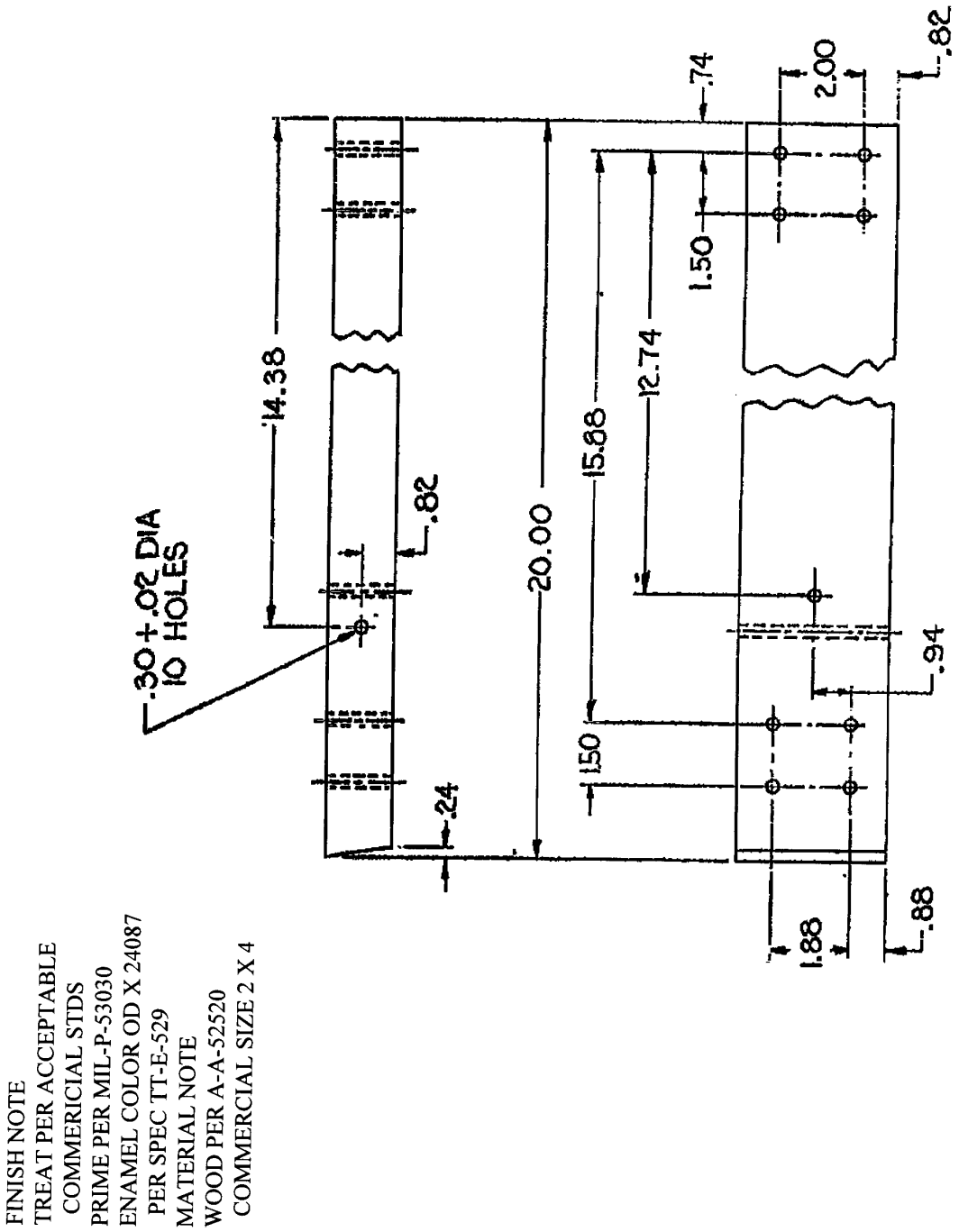
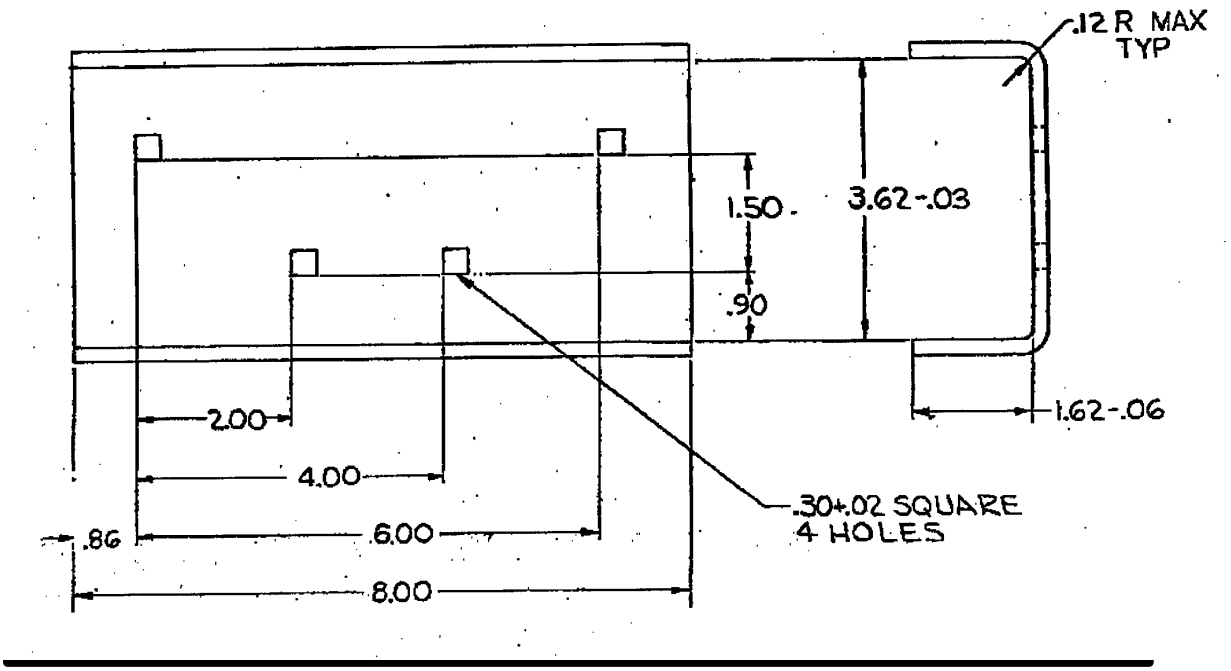


FIGURE 24. Support frame.



MUST BE FREE OF BURRS AND SHARP EDGES

FINISH NOTE
TREAT PER TYPE I OR III
SPEC TT-C-490
PRIME PER MIL-P-53030
ENAMEL, OD
SPEC TT-E-529 OR TT-E-485

MATERIAL NOTE
STEEL, CARBON, HRCQ P & Q OR CR
TEMPER 4 OR 5
SPEC QQ-S-698, 179 THICK

FIGURE 25. Connector, beam.

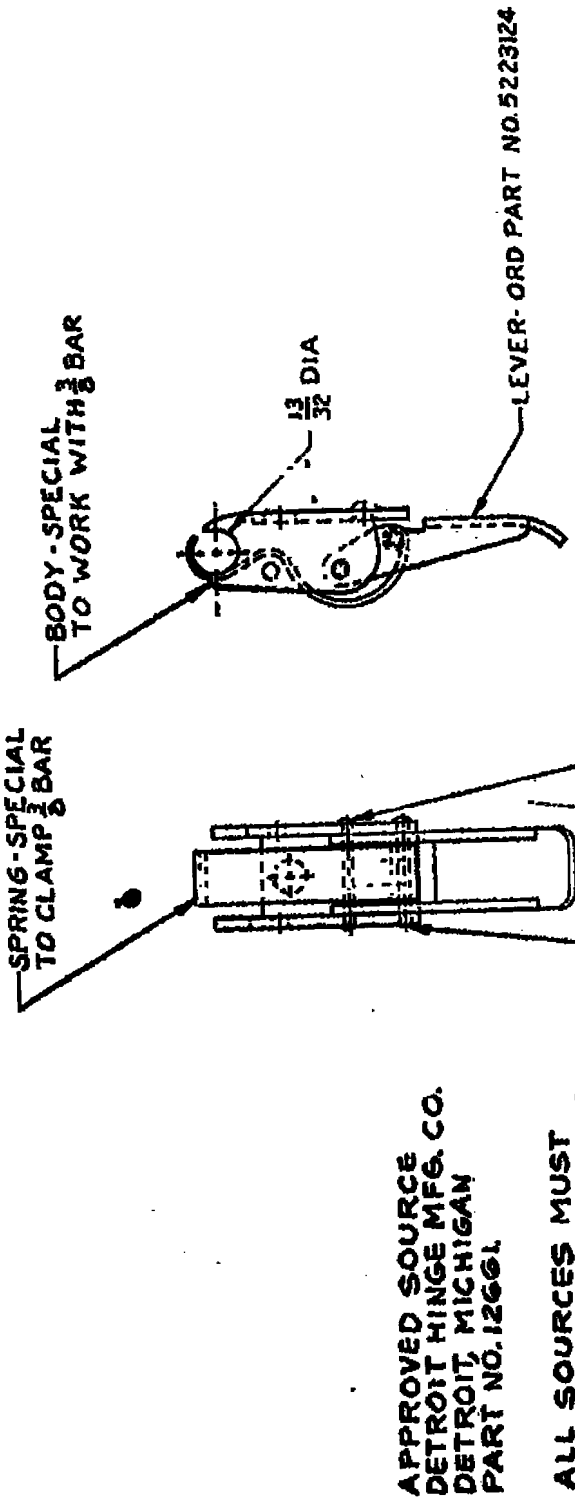
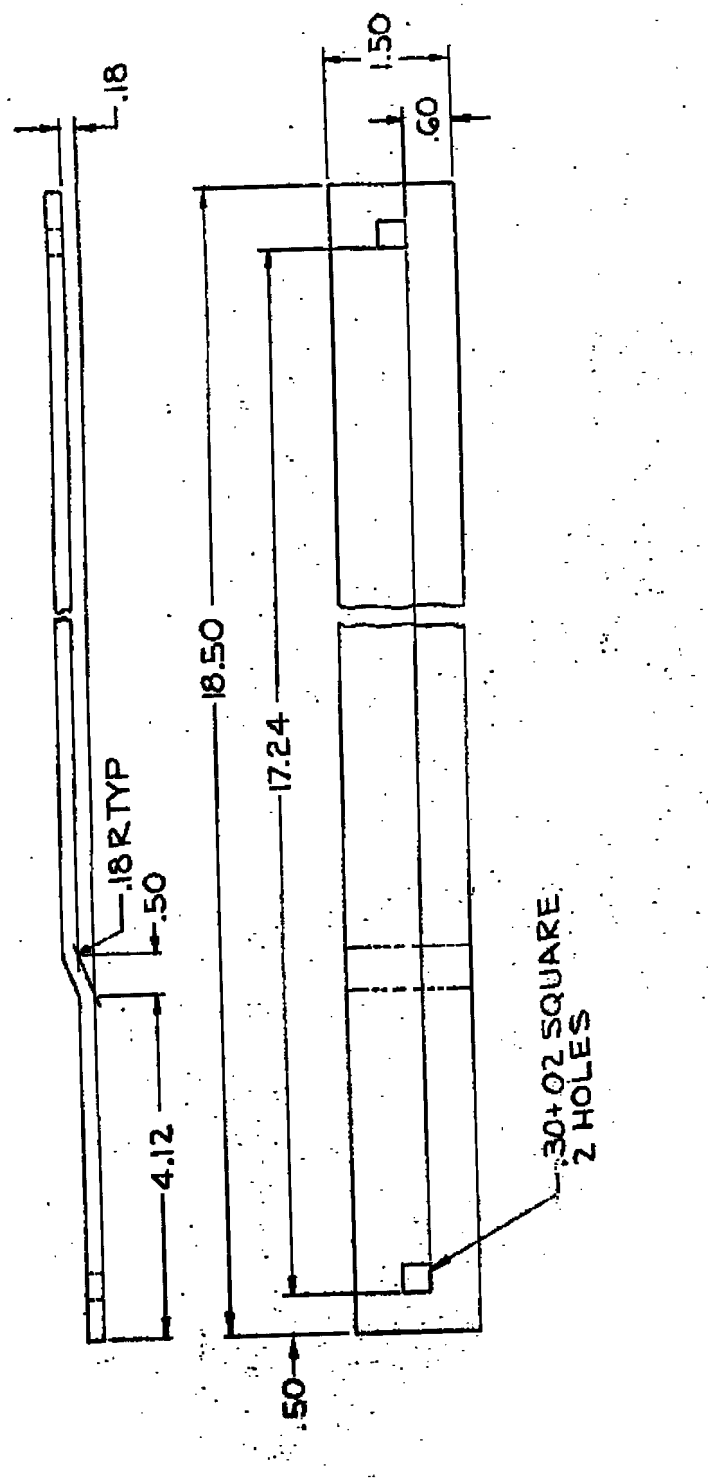


FIGURE 26. Fastener.

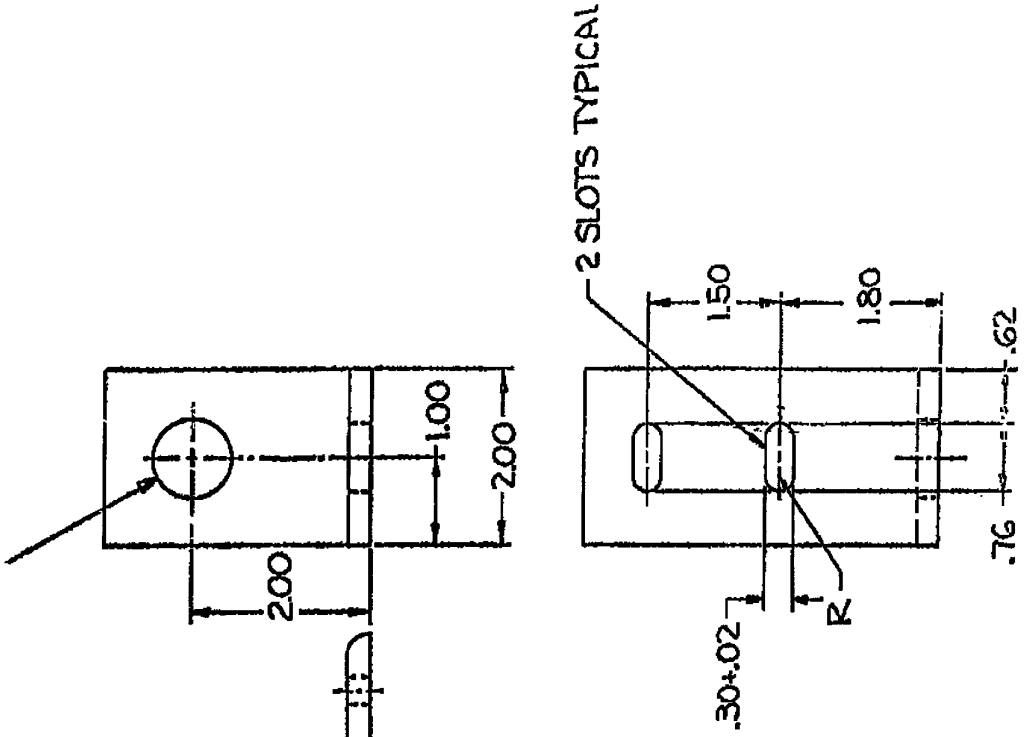


MUST BE FREE OF BURRS AND SHARP EDGES

FINISH NOTE
TREAT PER TYPE I OR III
SPEC TT-C-490
PRIME PER MIL-P-53030
ENAMEL, OD
SPEC TT-E-529 OR TT-E-485

MATERIAL NOTE
STEEL, CARBON, HRCQ P & Q OR CR
SPEC QQ-S-698, 179 THICK

FIGURE 27. Brace, frame support.

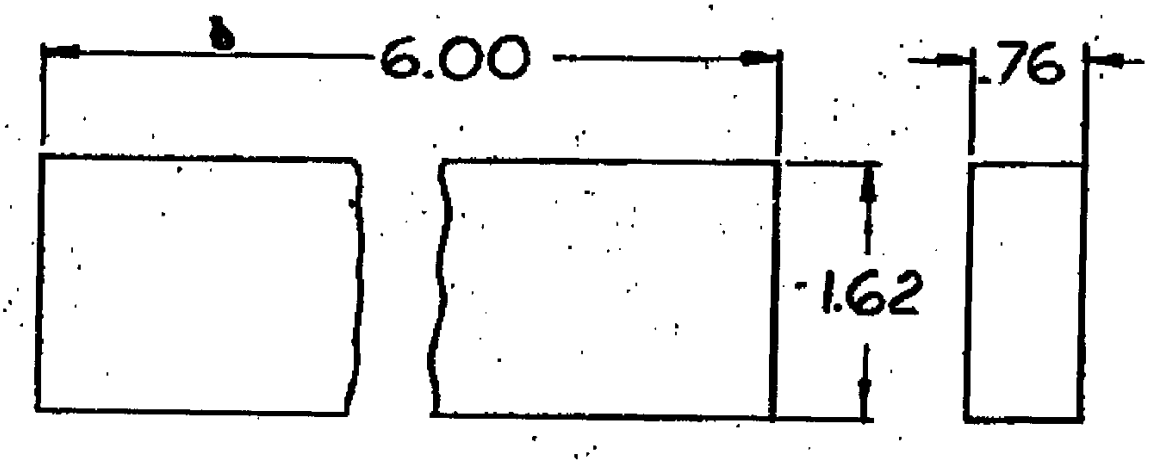


MUST BE FREE OF BURRS AND SHARP EDGES

FINISH NOTE
TREAT PER TYPE I OR III
SPEC TT-C-490
PRIME PER MIL-P-53030
ENAMEL, OD
SPEC TT-E-529 OR TT-E-485

MATERIAL NOTE
STEEL, CARBON
SPEC AMSTA A36
4 X 7 X 1/4 ANGLE

FIGURE 28. Bracket.



FINISH NOTE
TREAT PER ACCEPTABLE
COMMERCIAL STDS
PRIME PER MIL-P-53030
ENAMEL COLOR OD X 24087
PER SPEC TT-E-529
MATERIAL NOTE
WOOD PER A-A-52520
COMMERCIAL SIZE 2 X 4

FIGURE 28. Pad - Continued.

FIG. NO.	ARMY PART NO.	DESCRIPTION	MATERIAL	QTY REQD
29A	ASME B18.2.1	SCREW, CAP 1/4-2OUNC-2Ax2	ALLOY STEEL	4
29B	ASME B18.2.1	SCREW, CAP 1/4-2OUNC-2Ax2 1/4	ALLOY STEEL	36
29C	ASME B18.2.1	SCREW, CAP 1/4-2OUNC-2Ax2 1/2	ALLOY STEEL	16
29D	MS35751-202	BOLT, SQ.NECK 1/4-2OUNC-2Ax4 1/4	CARBON STEEL	2
29E	MS35751-14	BOLT, SQ.NECK 1/4-2OUNC-2Ax2 1/2	CARBON STEEL	46
29F	MS51967-3	NUT, HEX 1/4-2OUNC-2B	CARBON STEEL	150
29G	MS35751-18	BOLT, SQ.NECK 1/4-2OUNC-2Ax4	CARBON STEEL	8
29H	MS35751-19	BOLT, SQ.NECK 1/4-2OUNC-2Ax4 1/2	CARBON STEEL	24
29J	MS27183-10	WASHER, FLAT 1/4	CARBON STEEL	20
29K	MS63040-4	WASHER, FLAT 1/4	CARBON STEEL	120
29L	MS35338-63	WASHER, LOCK 1/4	CARBON STEEL	150

FIGURE 29. Closure frame assembly.

FIG. NO.	NOMENCLATURE	QTY REQD	SHEET
31	MATERIAL LIST	--	4
32	FRAME INSTALLATION - PLAN VIEW	--	1
33	FRAME INSTALLATION - LEFT ELEVATION	--	2
34	FRAME INSTALLATION - FRONT ELEVATION	--	3
35	FRAME INSTALLATION - REAR ELEVATION	--	3
36	BRACKET	2	5
37	BRACKET, FRONT (WELDMENT)	2	6
38	BRACKET	2	6
39	PLATE	2	6
40	HARDWARE, CLOSURE FRAME INSTALLATION SEE HARDWARE LIST	--	4

FIGURE 30. Parts list - closure frame installation.

DESCRIPTION	QTY REQD
1/4 THICK x 1 1/4 WIDE STEEL STRIP	13 INCHES LONG
1/4 THICK x 1 1/2 WIDE STEEL STRIP	63 INCHES LONG

FIGURE 31. Material list - closure frame installation.

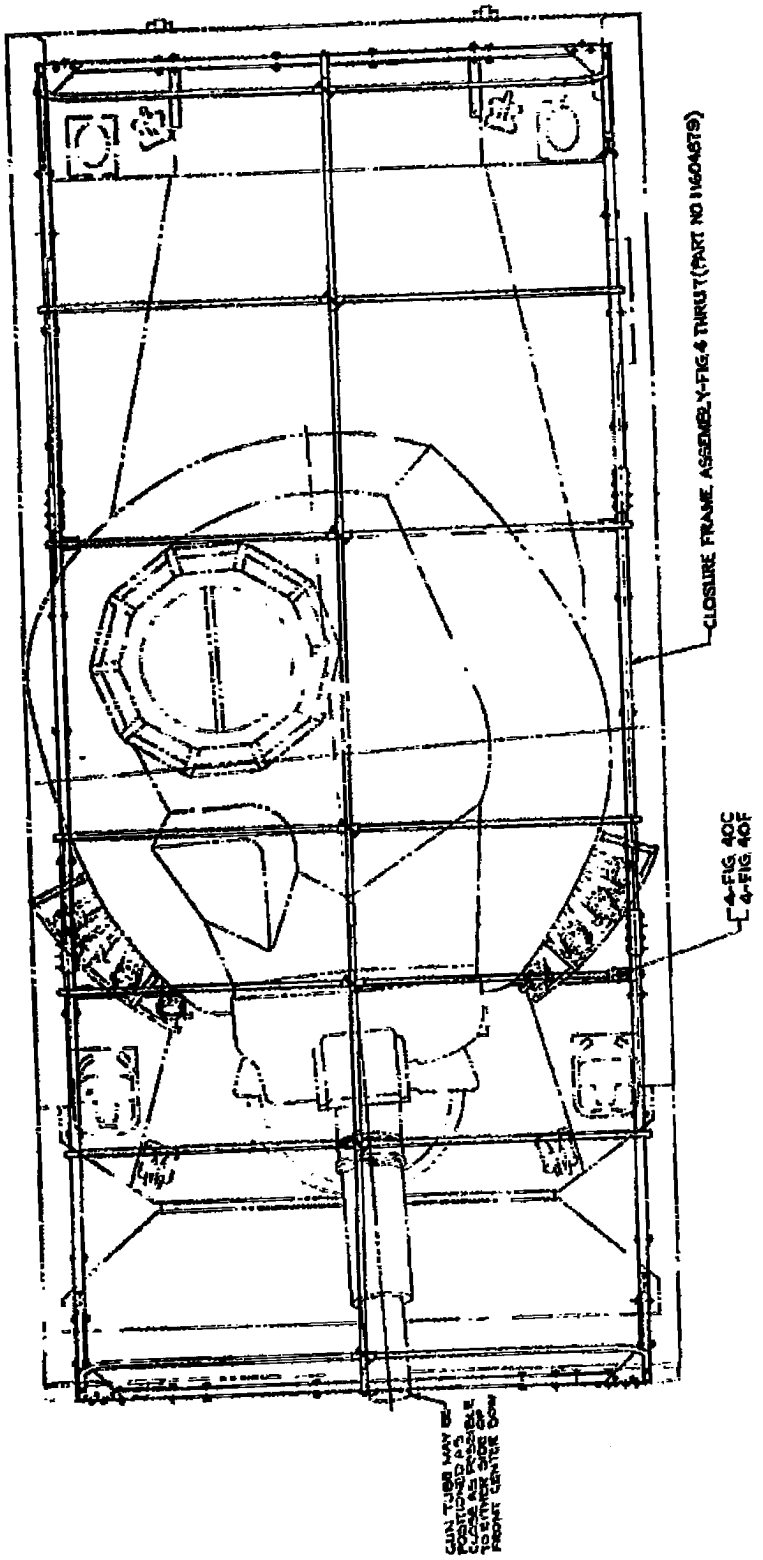


FIGURE 32. Frame installation- plan view.

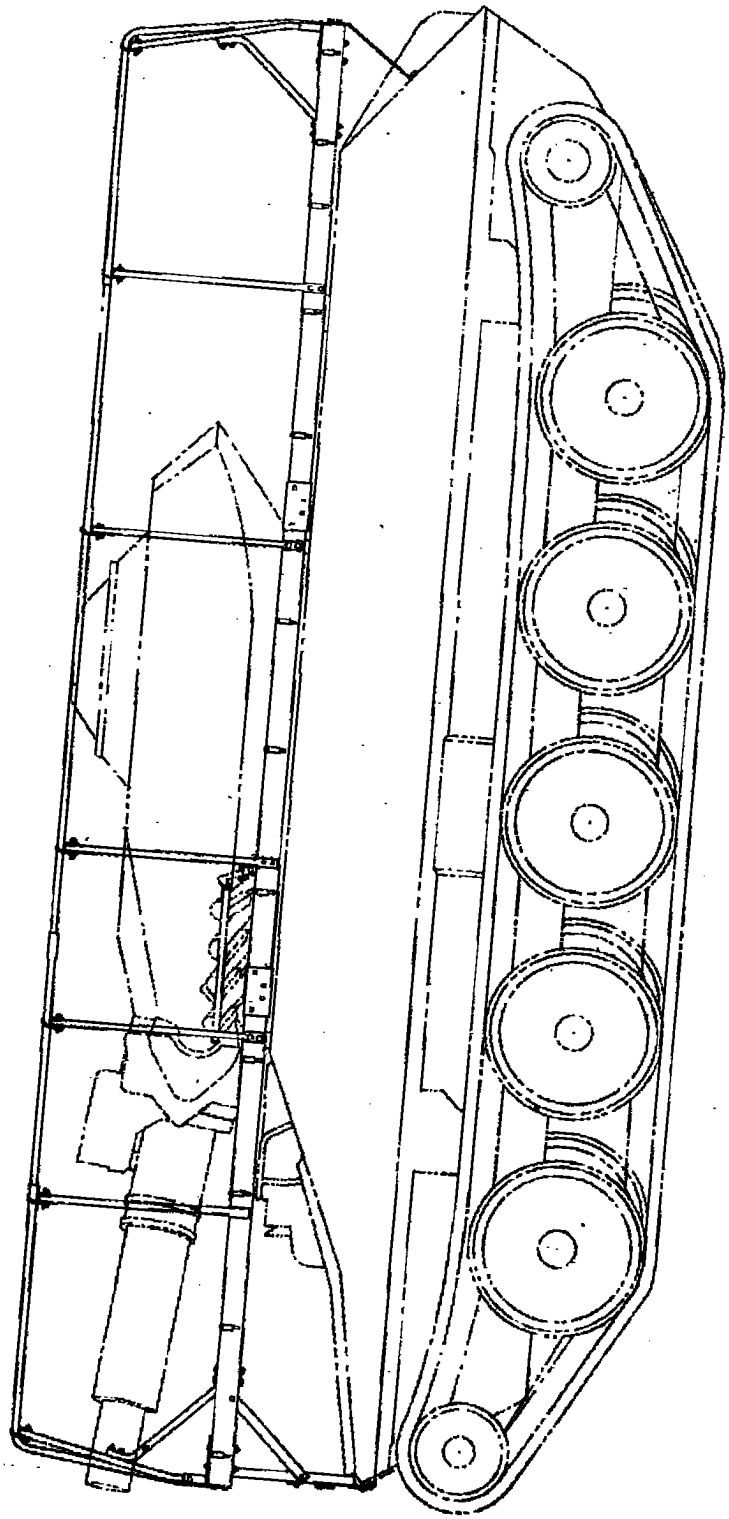


FIGURE 33. Frame installation- left elevation.

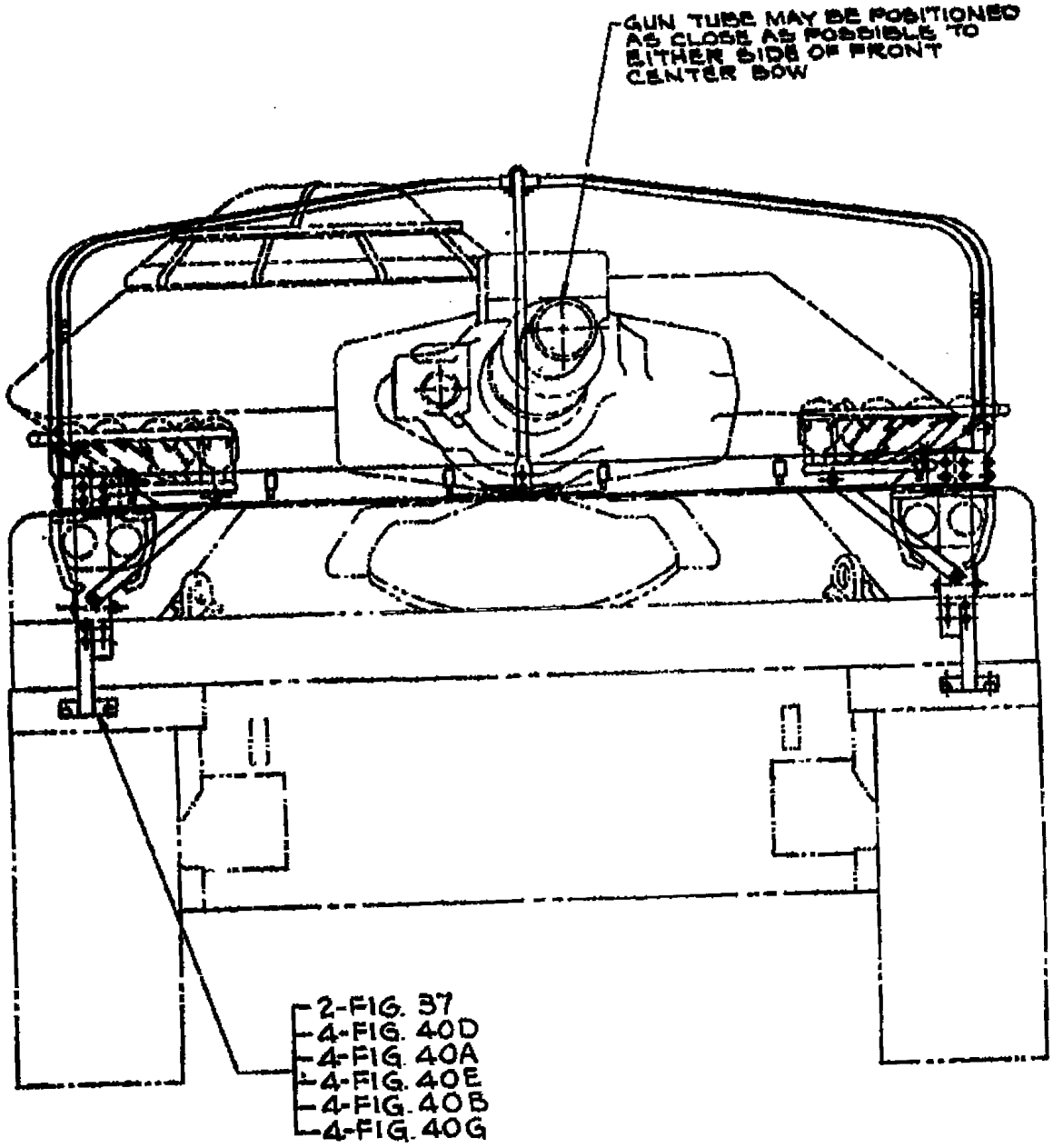


FIGURE 34. Frame installation- front elevation.

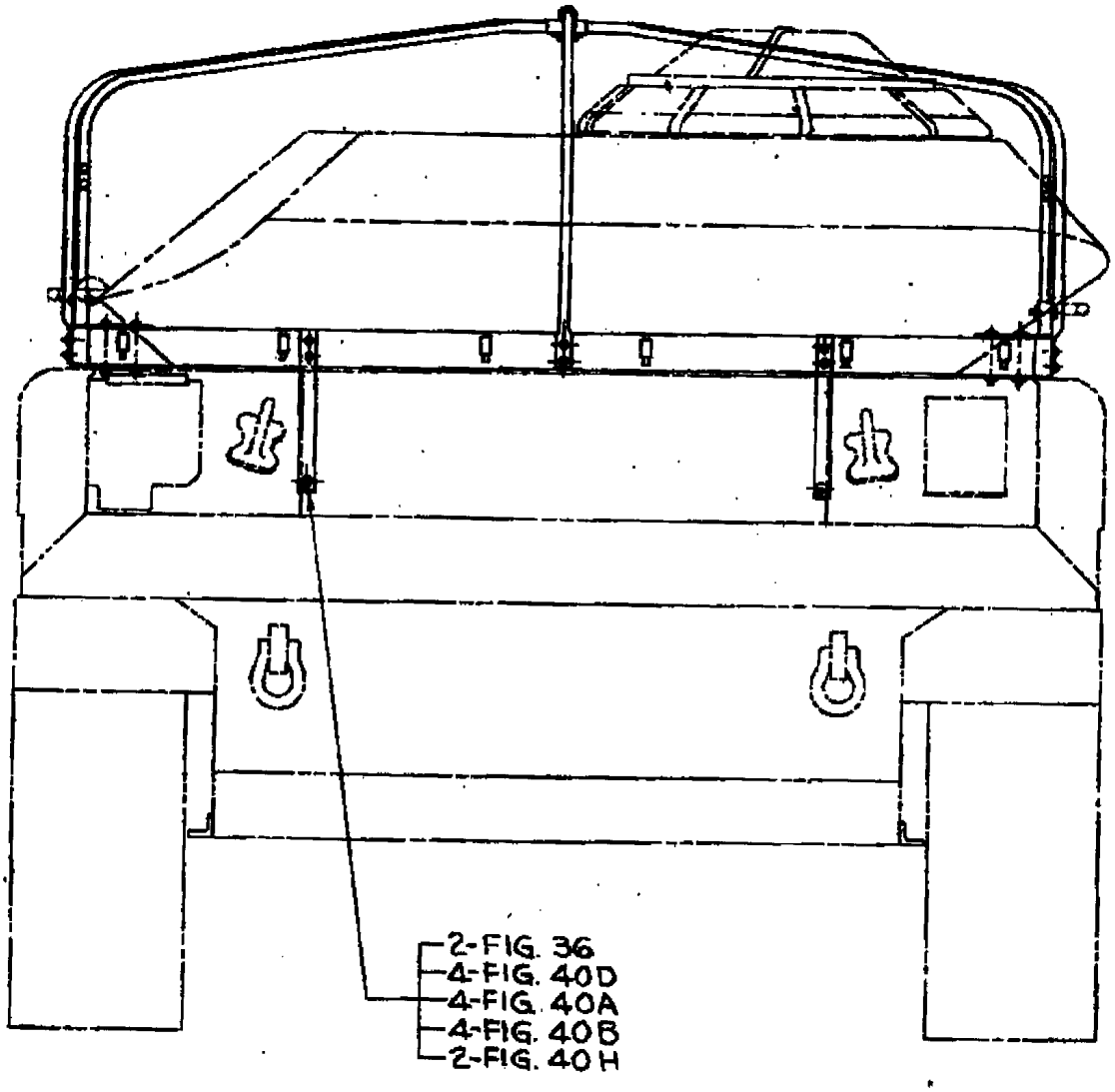
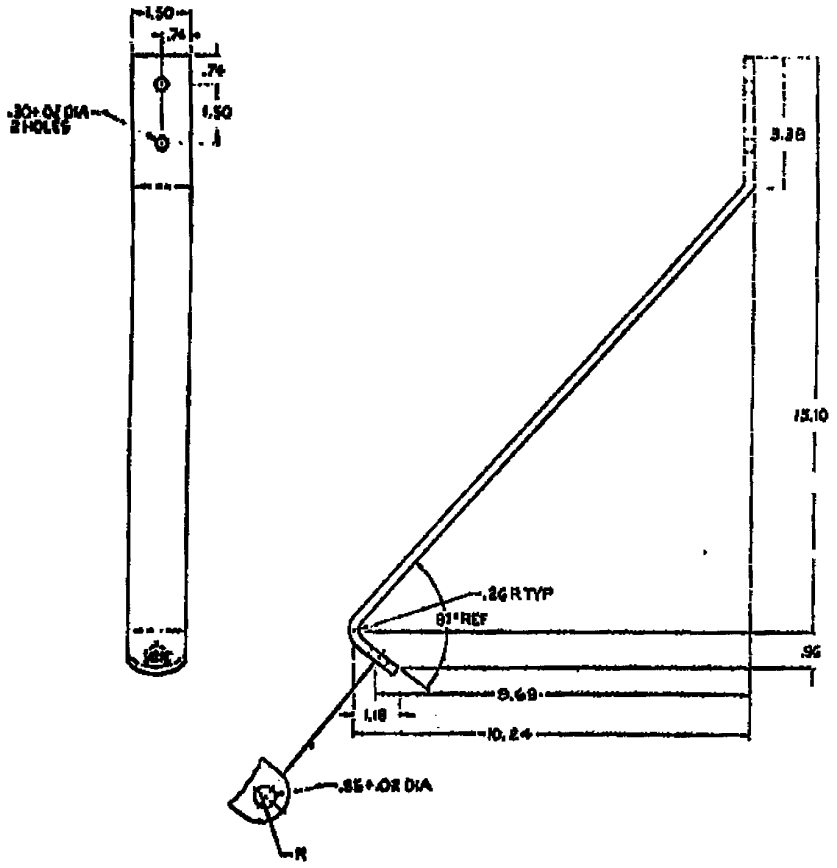


FIGURE 35. Frame installation- rear elevation.

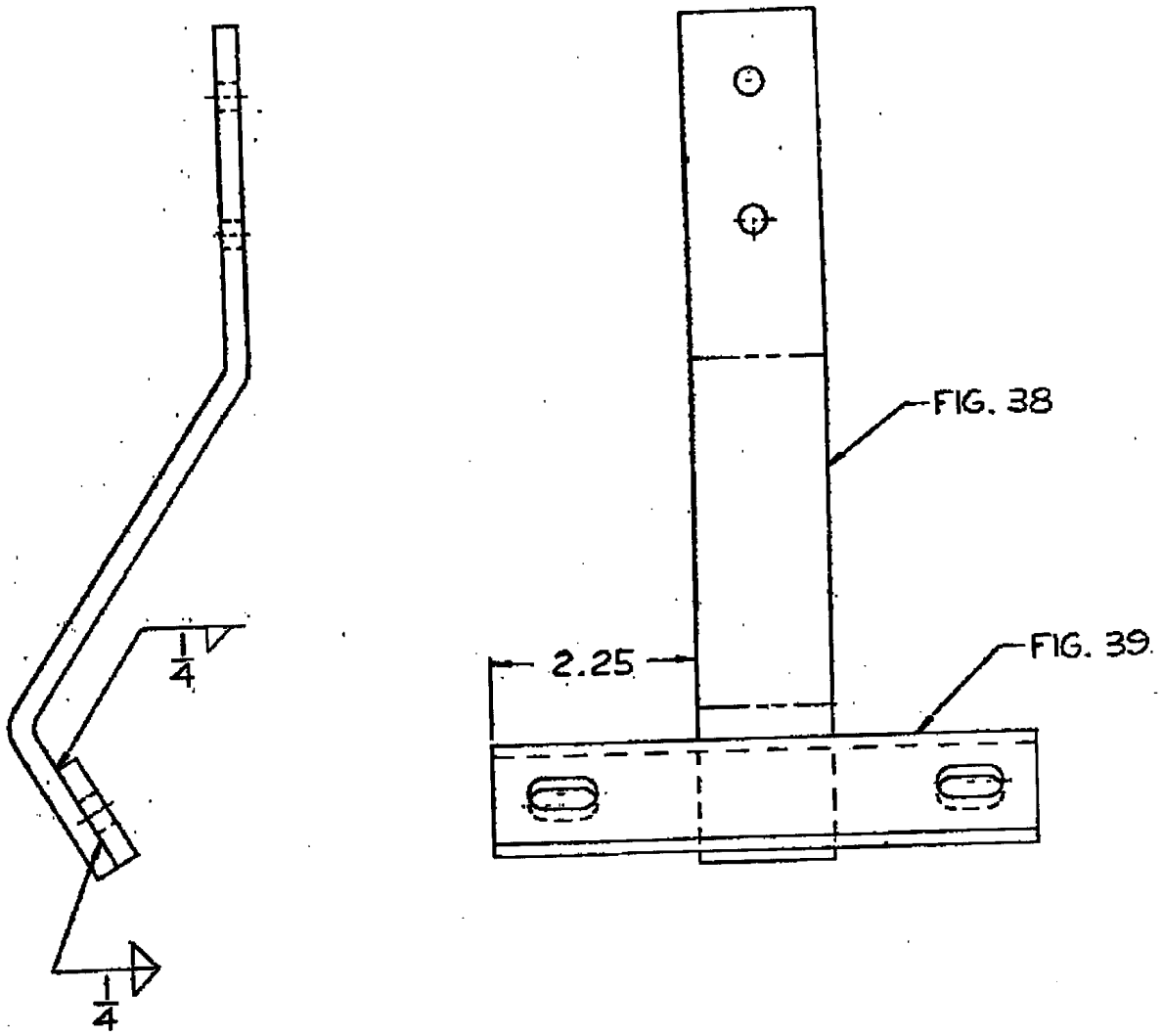


FINISH NOTE
TREAT PER TYPE I OR III
SPEC TT-C-490
PRIME PER
SPEC MIL-P-53030
ENAMEL, OD
SPEC TT-E-529 OR TT-E-485

MUST BE FREE OF BURRS AND SHARP CORNERS

MATERIAL NOTE
STEEL, CARBON, IN ACCORDANCE WITH ASTM A575 AND ASTM A663, OR ASTM A108

FIGURE 36. Bracket.



FINISH NOTE
TREAT PER TYPE I OR III
SPEC TT-C-490
PRIME PER
SPEC MIL-P-53030
ENAMEL, OD
SPEC TT-E-529 OR TT-E-485

FIGURE 37. Bracket front (weldment).

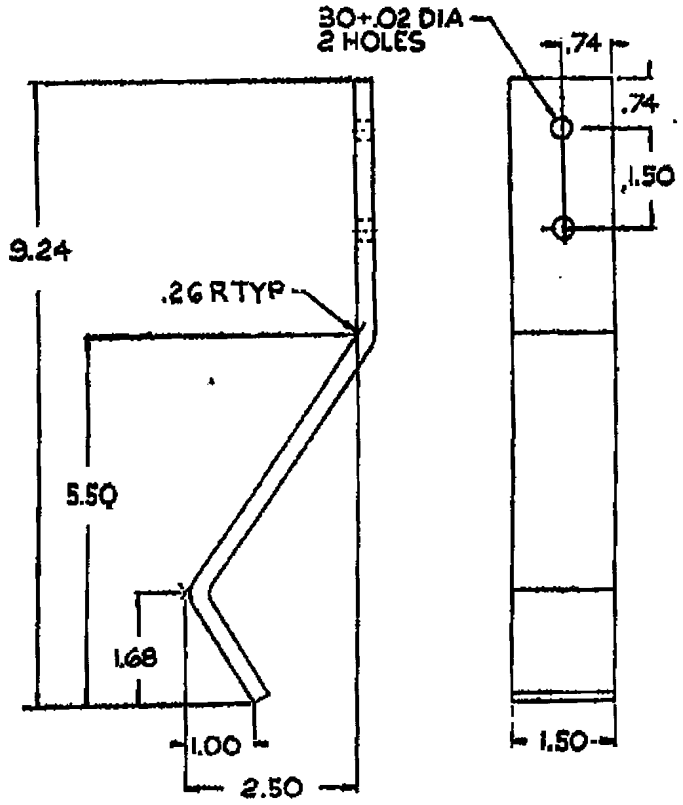
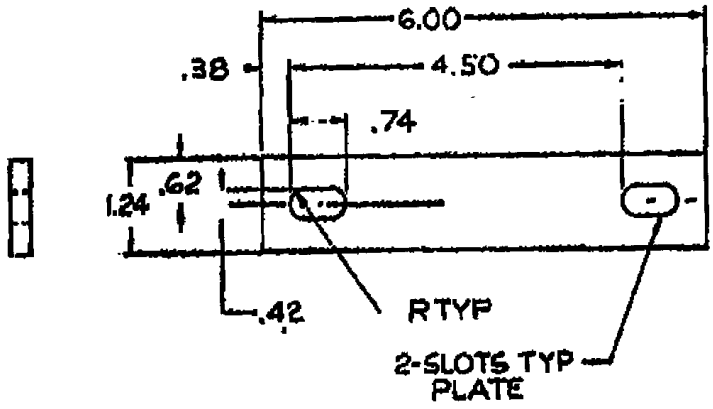


FIGURE 38. Bracket.



MATERIAL NOTE, STEEL, CARBON, ASTM A578, ASTM A663, ASTM A576, OR ASTM A675, 0.250 THICK.

FIGURE 39. Plate.

FIG. NO.	ARMY PART NO.	DESCRIPTION	MATERIAL	QTY REQD
40A	MS35338-63	WASHER, LOCK, 1/4	CARBON STEEL	8
40B	MS51967-3	NUT, HEX, 1/4-20UNC-2B	CARBON STEEL	8
40C	ASME B18.2.1	SCREW, CAP, 1/2-13UNC-2Ax1	ALLOY STEEL	4
40D	MS35751-13	BOLT, SQ.NECK, 1/4-20UNC-2Ax2 1/4	CARBON STEEL	8
40E	MS63040-4	WASHER, FLAT, 1/4	CARBON STEEL	8
40F	10941915-5	WASHER, FLAT, HARDENED, 1/2	ALLOY STEEL	4
40G	ASME B18.2.1	SCREW, CAP, 3/8-24UNF-2Ax1 3/4	ALLOY STEEL	4
40H	ASME B18.2.1	SCREW, CAP, 1/2-20UNF-2Ax1 3/8	ALLOY STEEL	2

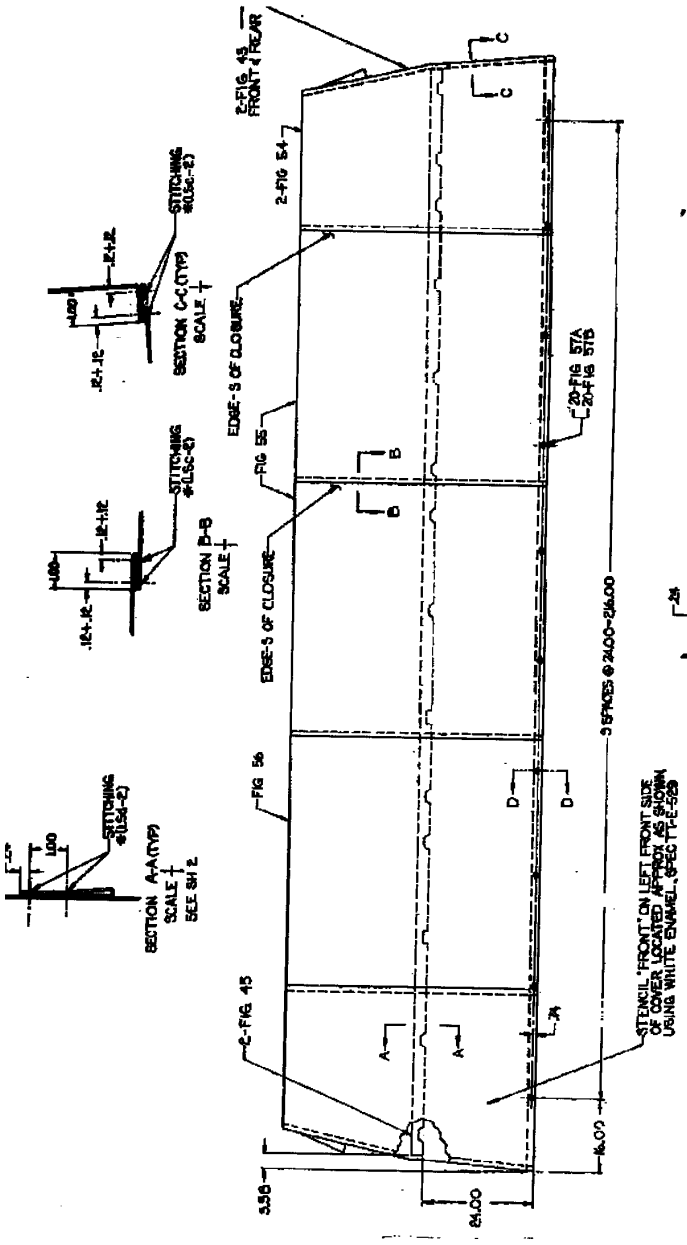
FIGURE 40. Hardware-closure frame installation.

	FIG. NO.	NOMENCLATURE	QTY REQD
	42	COVER, CLOSURE-LEFT SIDE ELEVATION	--
	43	COVER, CLOSURE-FRONT & REAR ELEVATION	--
	44	FLAP	4
	45	FLAP	2
	46	REINFORCEMENT	2
	47	COVER, END	2
	48	COVER, END	2
⊕	49	HOOD, VENT ASSEMBLY	2
⊕	50	HOOD, VENT	2
⊕	51	ROD ASSEMBLY	2
⊕	52	ROD, HOOD	2
⊕	53	TIP, ROD END	4
	54	COVER, SIDE	2
	55	COVER, SIDE	2
	56	COVER, SIDE	1
	57	HARDWARE-CLOSURE COVER-SEE HARDWARE LIST	

FIGURE 41. Parts list-closure cover.

⊕

CONVERSION LIST	
FIG. NO.	PART NO.
49	10913563
50	10913537
51	10913561
52	10913542
53	10913551



ALL PARTS TO BE IDENTIFIED
BY FIGURE NUMBER

MANUFACTURER'S
IDENTIFICATION MUST APPEAR ON
INSIDE OF COVER

STITCHING NOTE
STITCH PER FED-STD-751,
8-10 STITCHES PER INCH,
ASSURE WEATHER PROOF SEAMS.

MATERIAL NOTE
THREAD, NYLON, TYPE II, CLASS 1,
SIZE B, COLOR OD, SPEC V-T-295

FIGURE 42. Closure cover - left side elevation.

ALL PARTS TO BE IDENTIFIED
BY FIGURE NUMBER

MANUFACTURER'S
IDENTIFICATION MUST APPEAR ON
INSIDE OF COVER

STITCHING NOTE
STITCH PER FED-STD-751,
8-10 STITCHES PER INCH,
ASSURE WEATHER PROOF SEAMS.

MATERIAL NOTE
THREAD, NYLON, TYPE II, CLASS 1,
SIZE B, COLOR OD, SPEC V-T-295

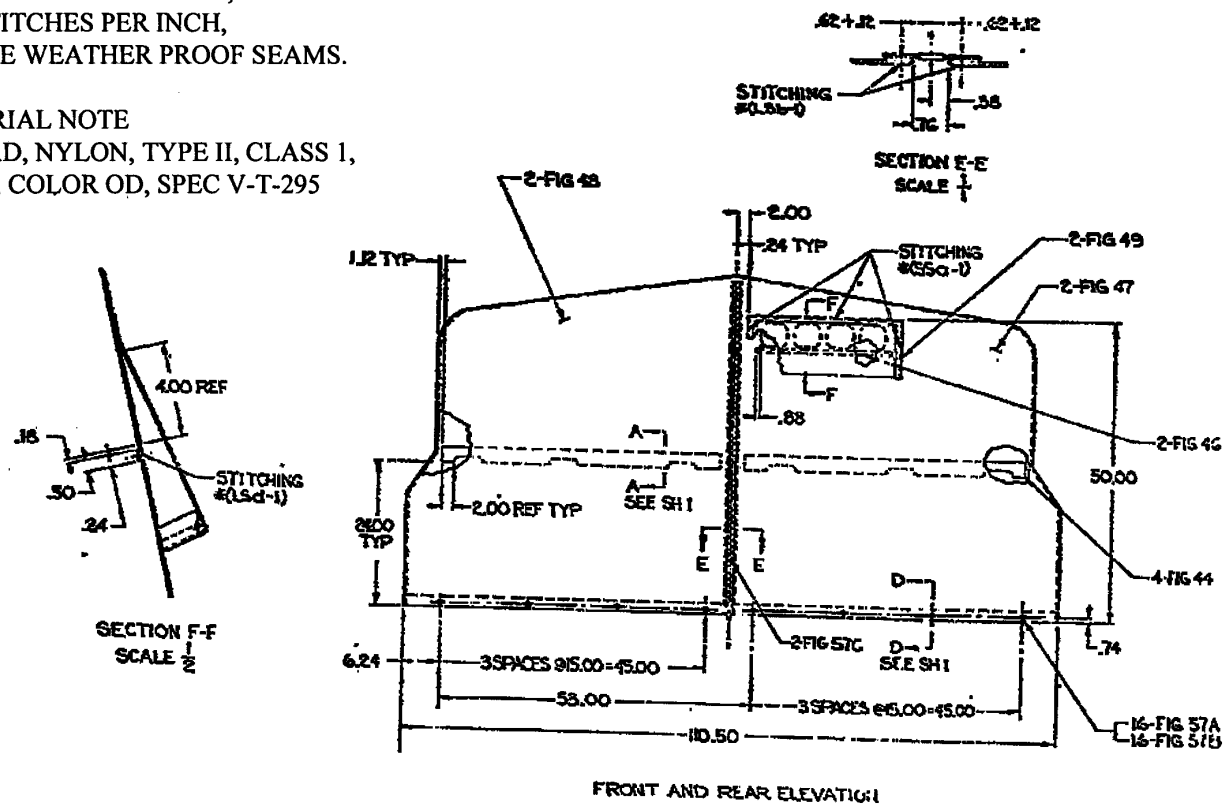
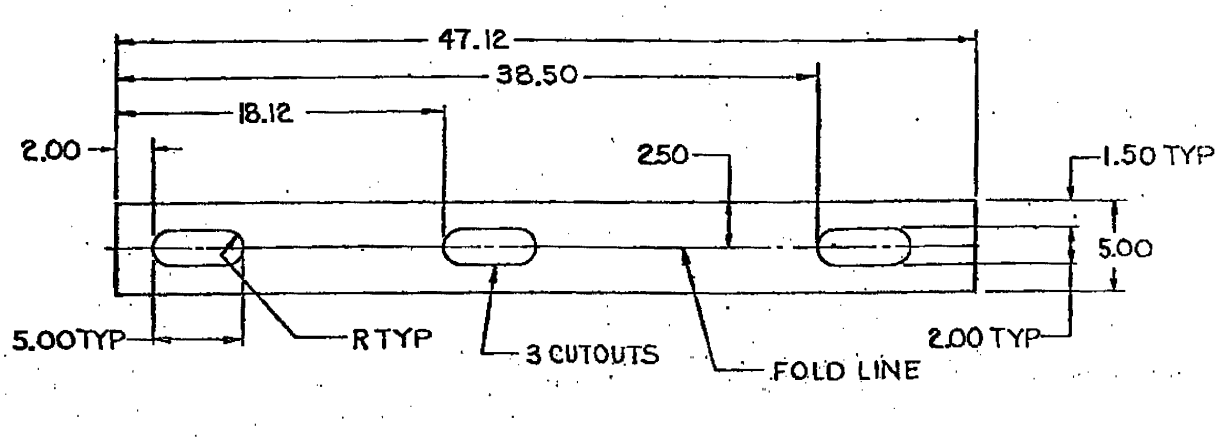
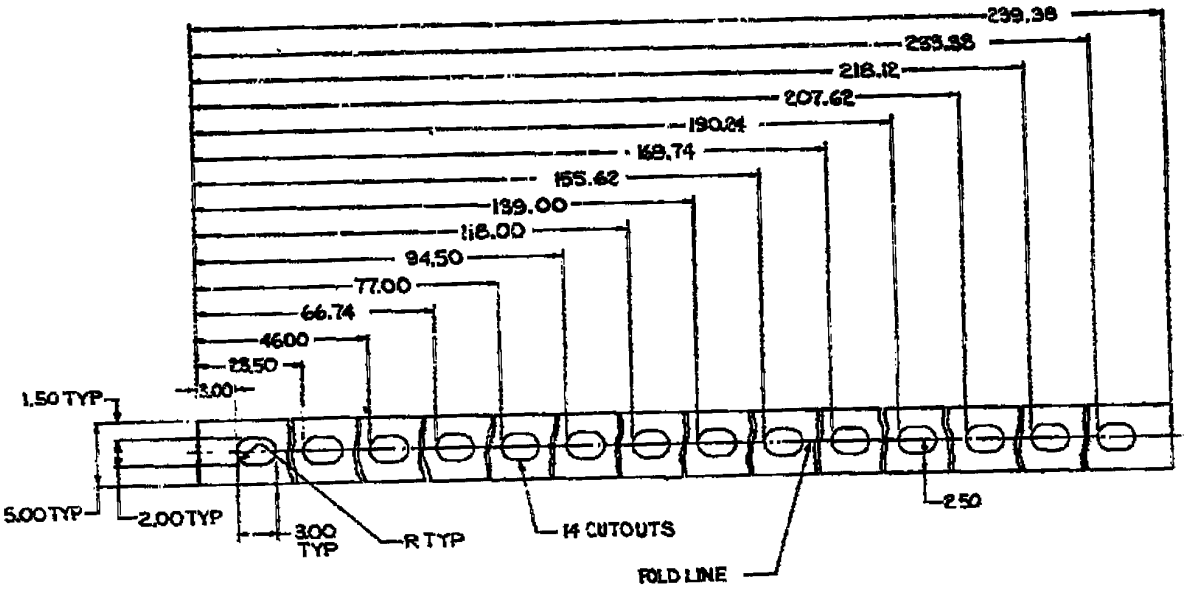


FIGURE 43. Cover, closure.



MATERIAL NOTE
CLOTH, COATED NYLON
TYPE II, CLASS 3, BALANCED COATING
SPEC MIL-C-20696
MIN. OVERALL WEIGHT TO BE
14 OZ PER SQ YD COLOR OD NO. X34087 PER
FED-STD-595

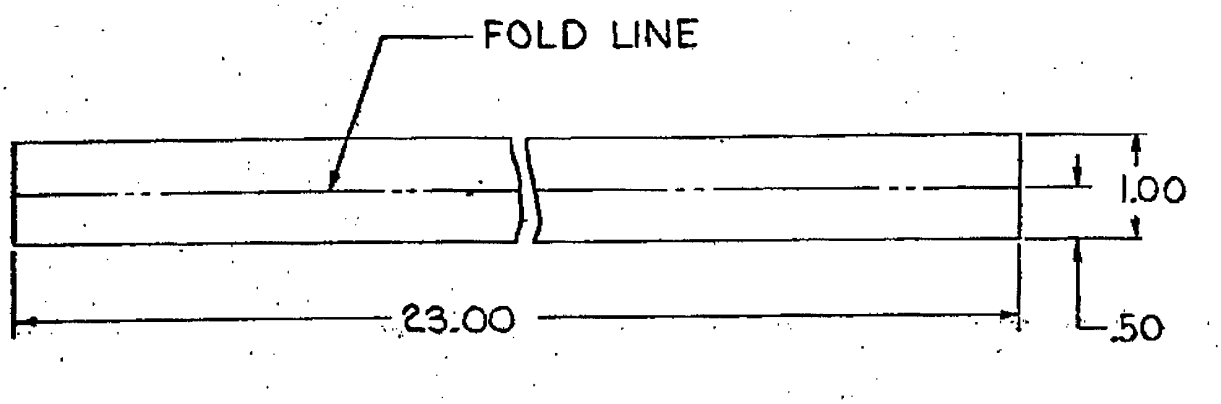
FIGURE 44. Flap, front and rear, closure cover.



MATERIAL NOTE
CLOTH, COATED NYLON
TYPE II, CLASS 3, BALANCED COATING
SPEC MIL-C-20696
MIN. OVERALL WEIGHT TO BE
14 OZ PER SQ YD COLOR OD NO. X34087 PER
FED-STD-595

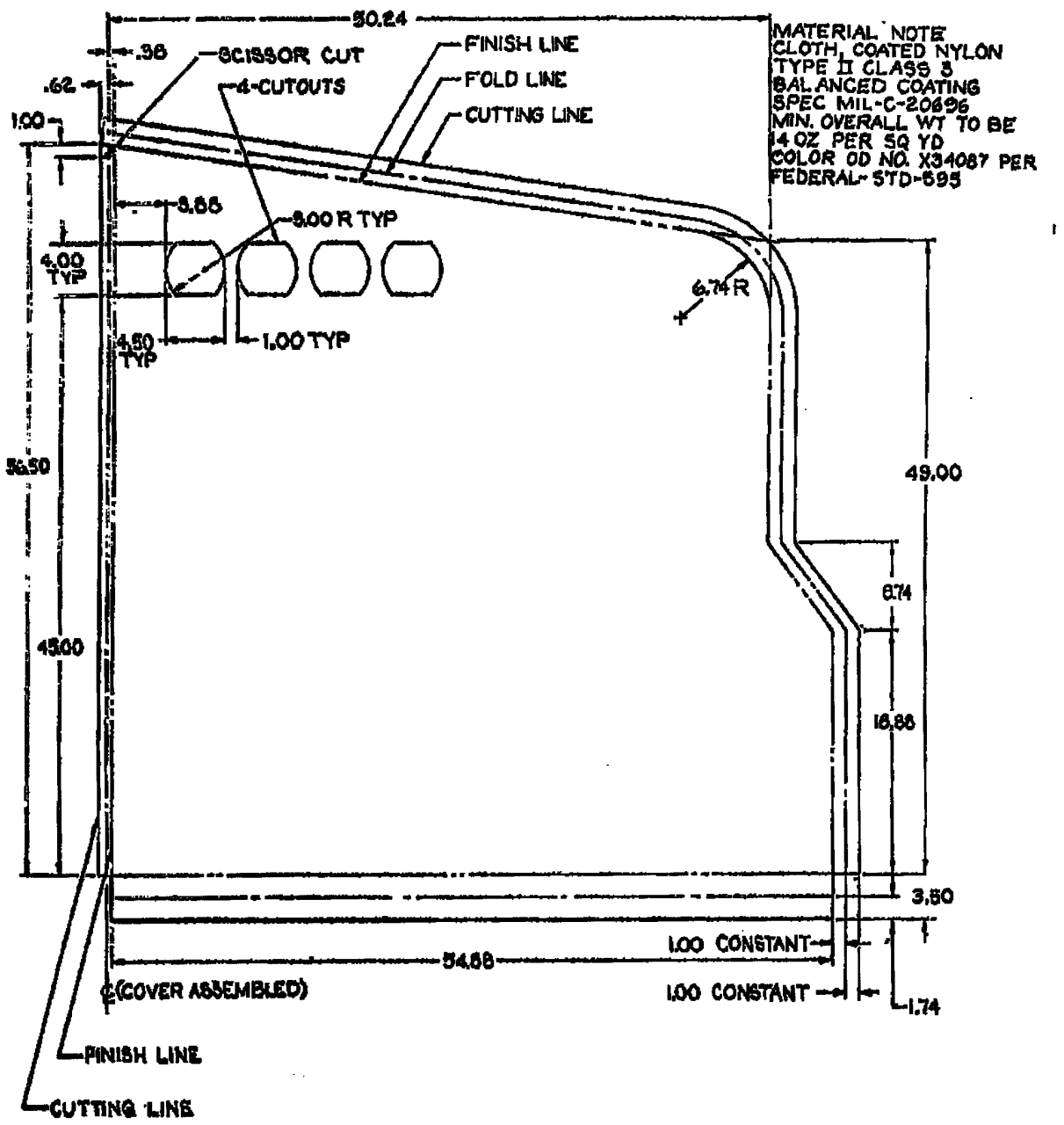
INTERPRET DRAWINGS IN ACCORDANCE WITH MIL-D-1000

FIGURE 45. Flap, side, closure cover.



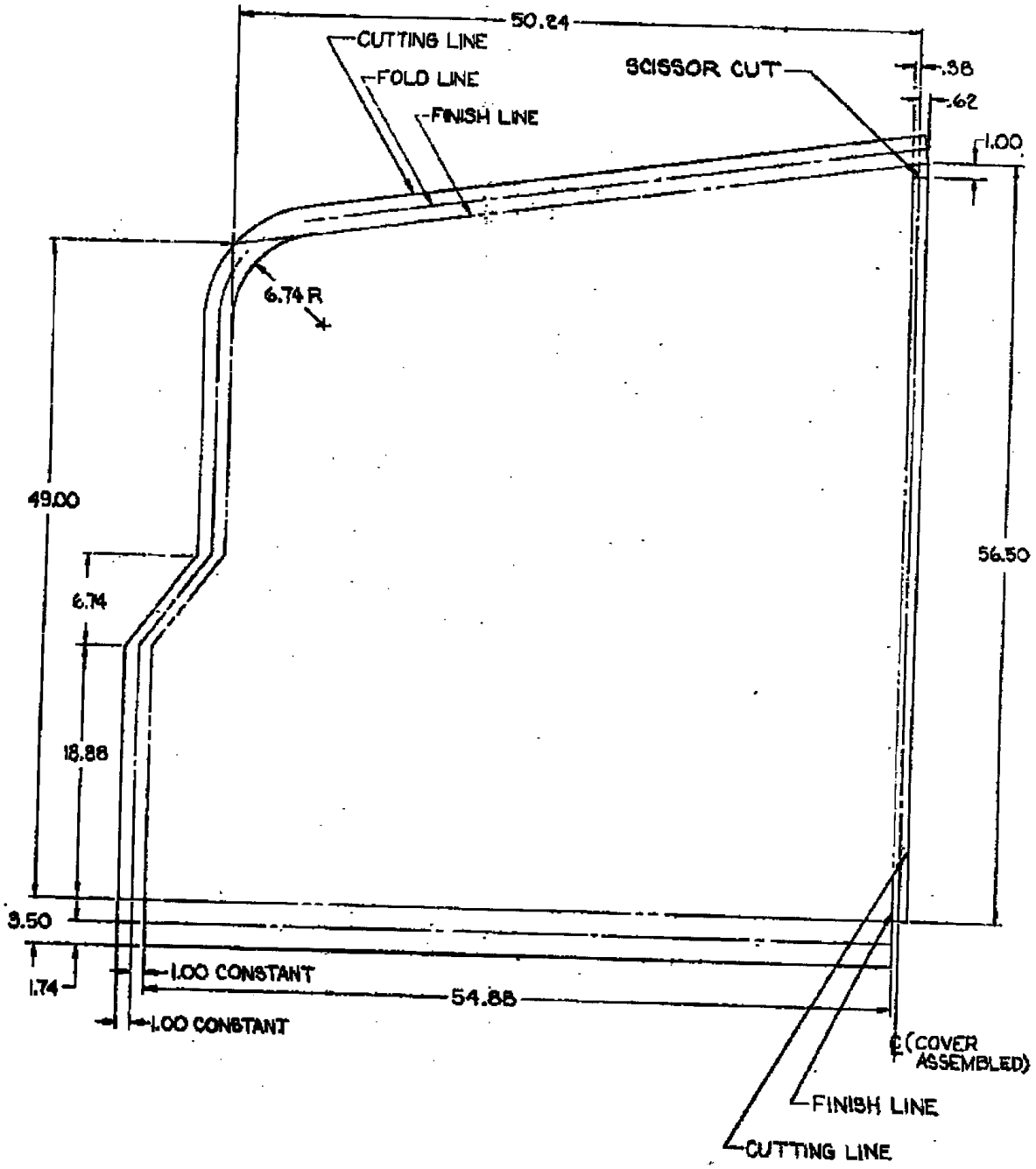
MATERIAL NOTE
CLOTH, COATED NYLON
TYPE II, CLASS 3, BALANCED COATING
SPEC MIL-C-20696
MIN. OVERALL WEIGHT TO BE
14 OZ PER SQ YD COLOR OD NO. X34087 PER
FED-STD-595

FIGURE 46. Reinforcement, closure cover.



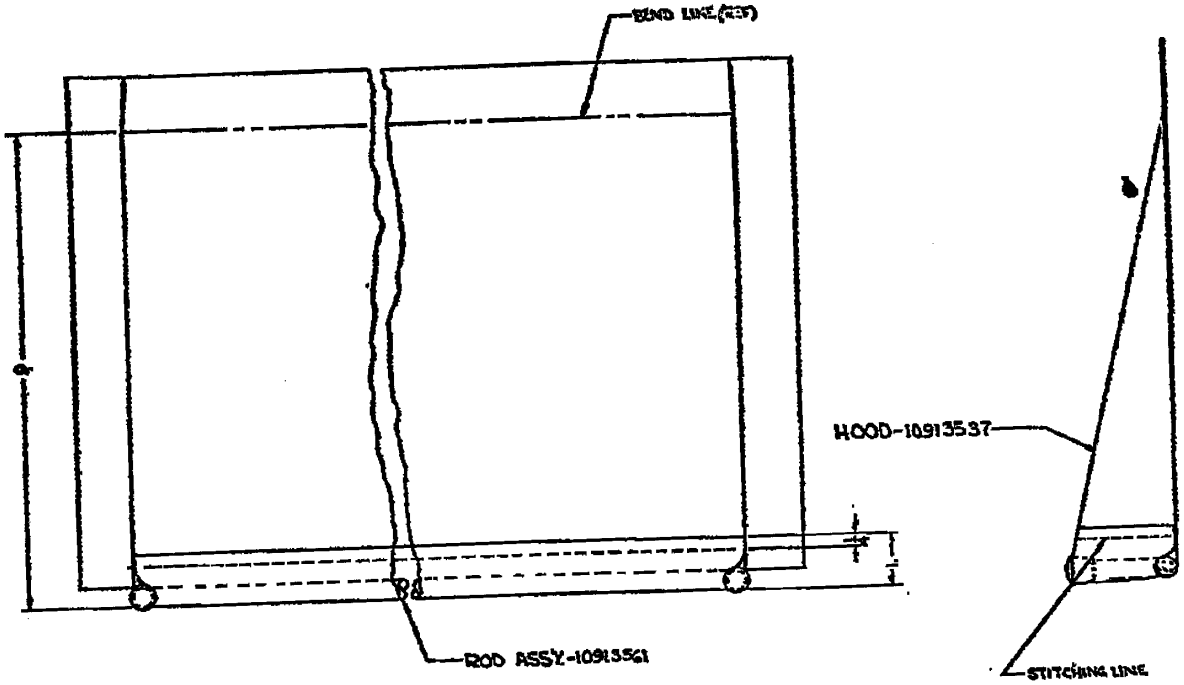
DRAWING NO. F 11604881

FIGURE 47. Cover, end, closure (right rear and left front).



DRAWING NO. F 11604881

FIGURE 48. Cover, end, closure (left rear and right front).



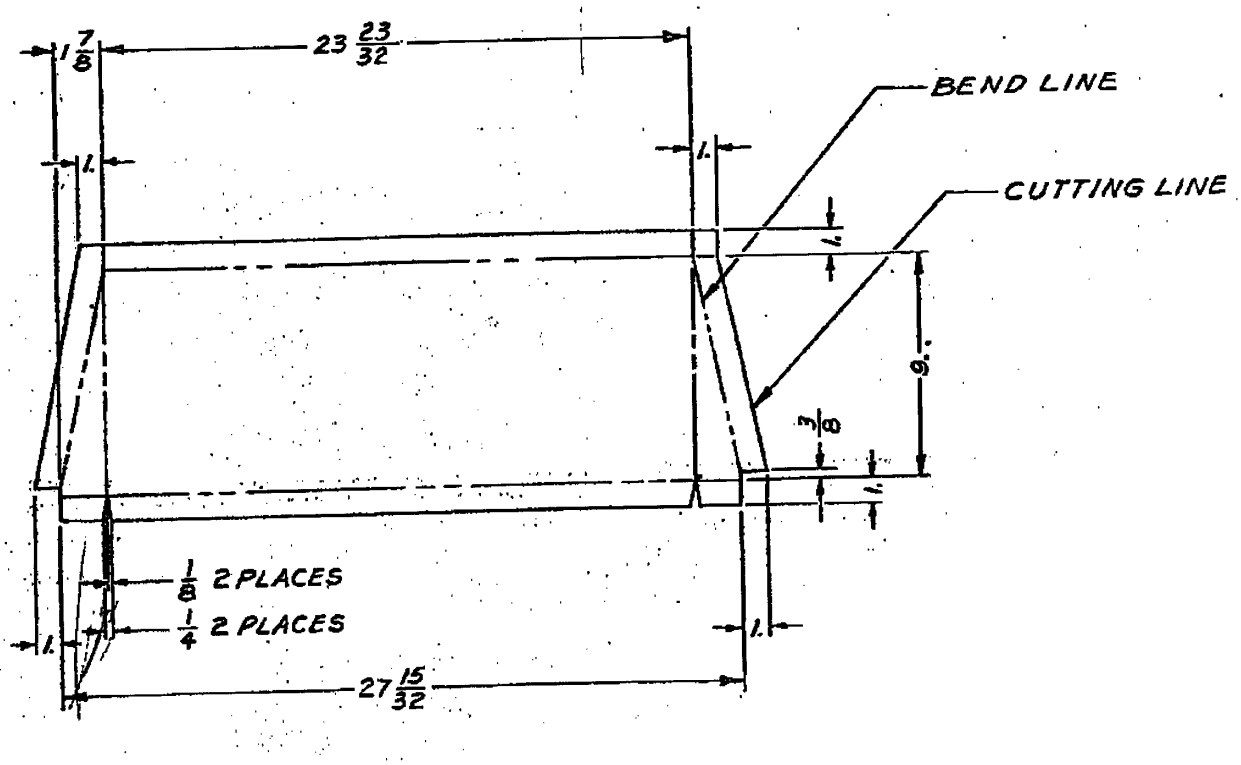
MANUFACTURER SHALL BE RESPONSIBLE FOR FINAL FIT OF COVER

STITCHING TYPE 301, FED-STD-751
MANUFACTURER MUST ASSURE WEATHER PROOF SEAMS.

THREAD MYLON, TYPE II, CLASS I, SPEC V-T-295

PART NO. 10913563

FIGURE 49. Hood, vent, closure, vehicle (sewn).



MATERIAL NOTE: CLOTH, COATED, TYPE II, CLASS 3, COLOR, GREEN, SHADE DESIGNATED NO. 34087 OF MIL-STD-595, SPEC MIL-C-20696, WAIVE PAR. 3.5

PART NO. 10913537

FIGURE 50. Hood, vent, closure, vehicle (sewn).

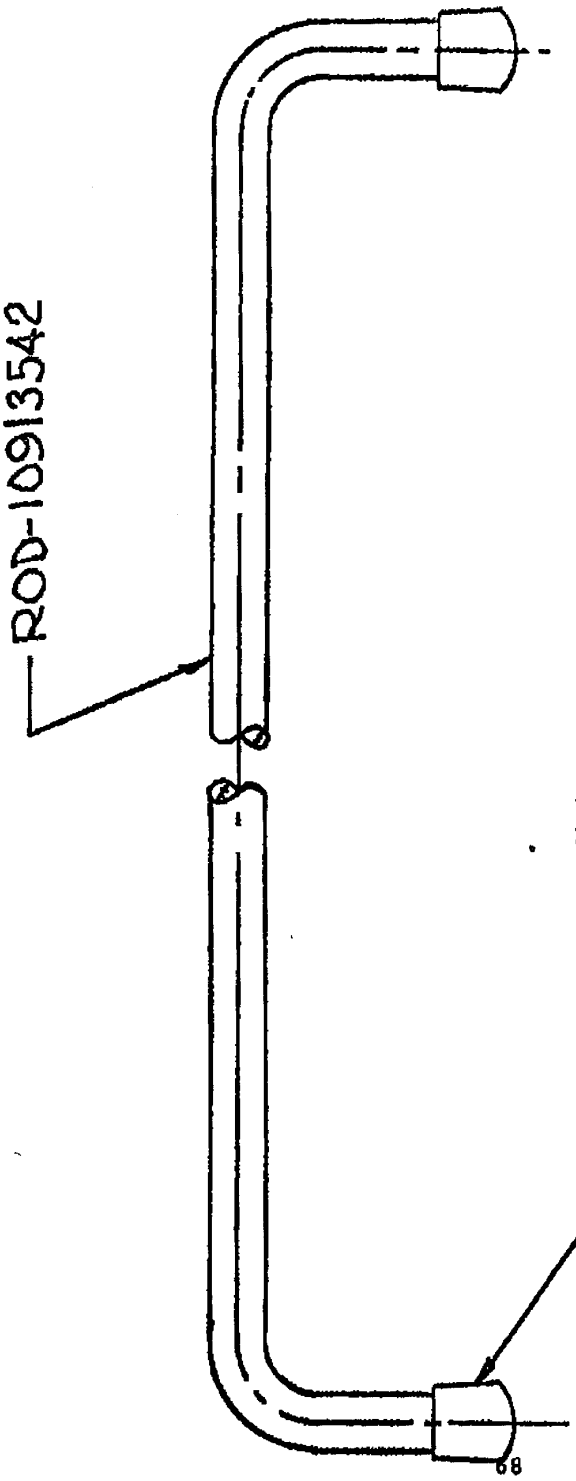
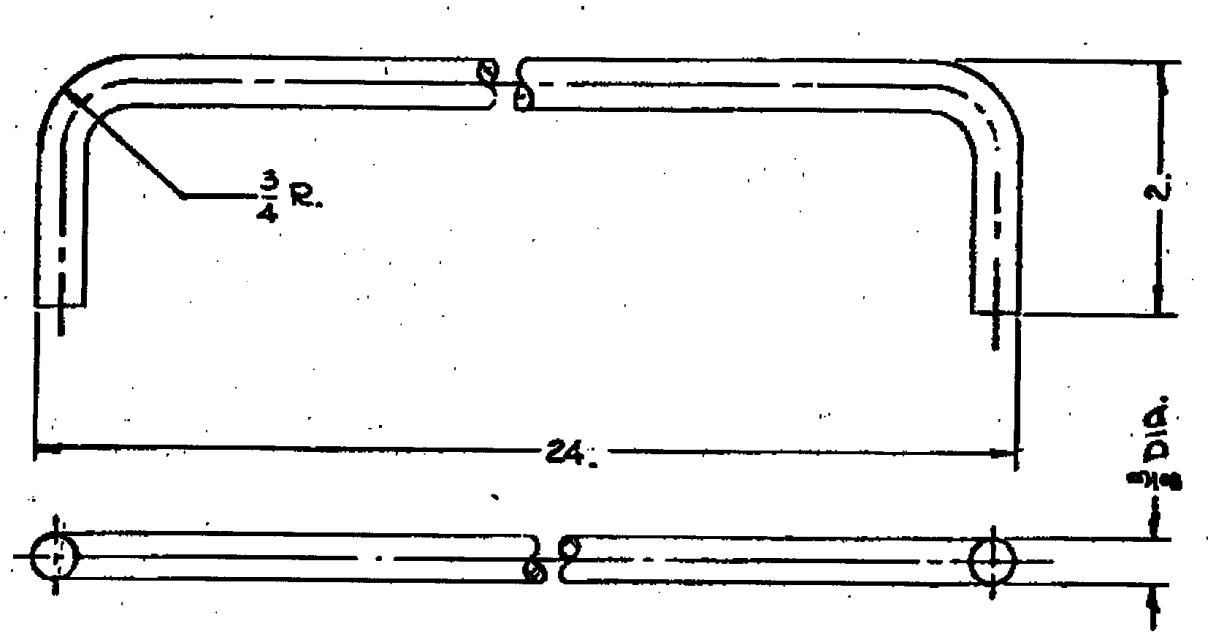


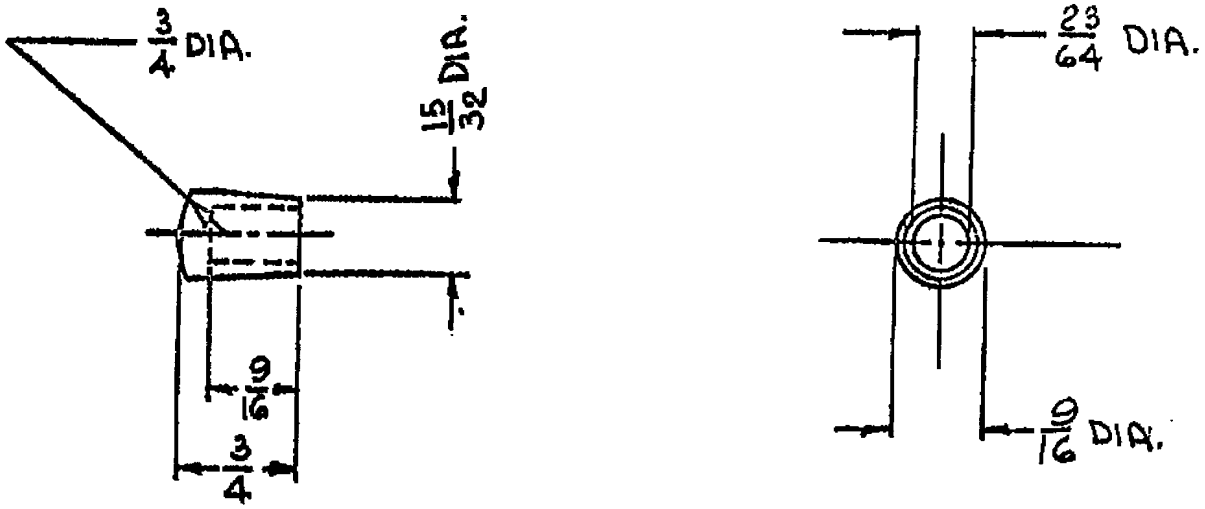
FIGURE 51. Rod assembly, hood, vent, closure vehicle.



MUST BE FREE OF BURRS AND SHARP EDGES

MATERIAL NOTE:
ALUMINUM ALLOY IN ACCORDANCE WITH ASTM B241, B221.

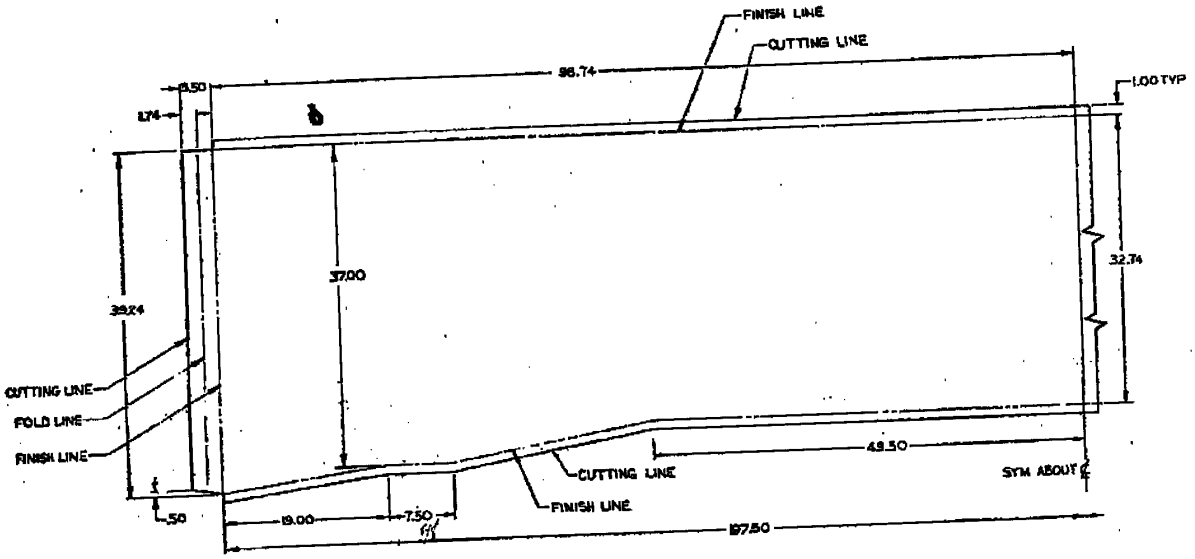
FIGURE 52. Rod, hood, vent, closure, vehicle.



NOTE: MARK ITEM WITH CAPITAL LETTERS “OZ”

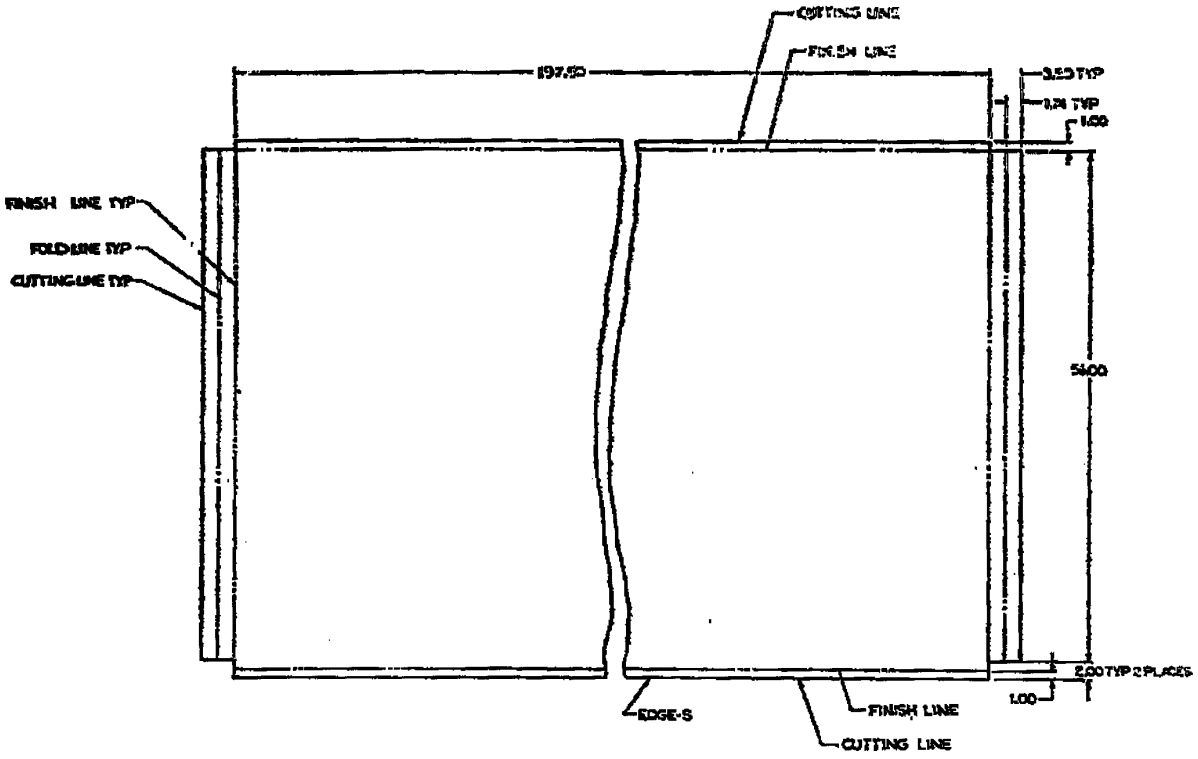
MATERIAL NOTEF:
RUBBER
GRADE SC6158, C, F2
SPEC MIL-R-3065

FIGURE 53. Tip, rod end.



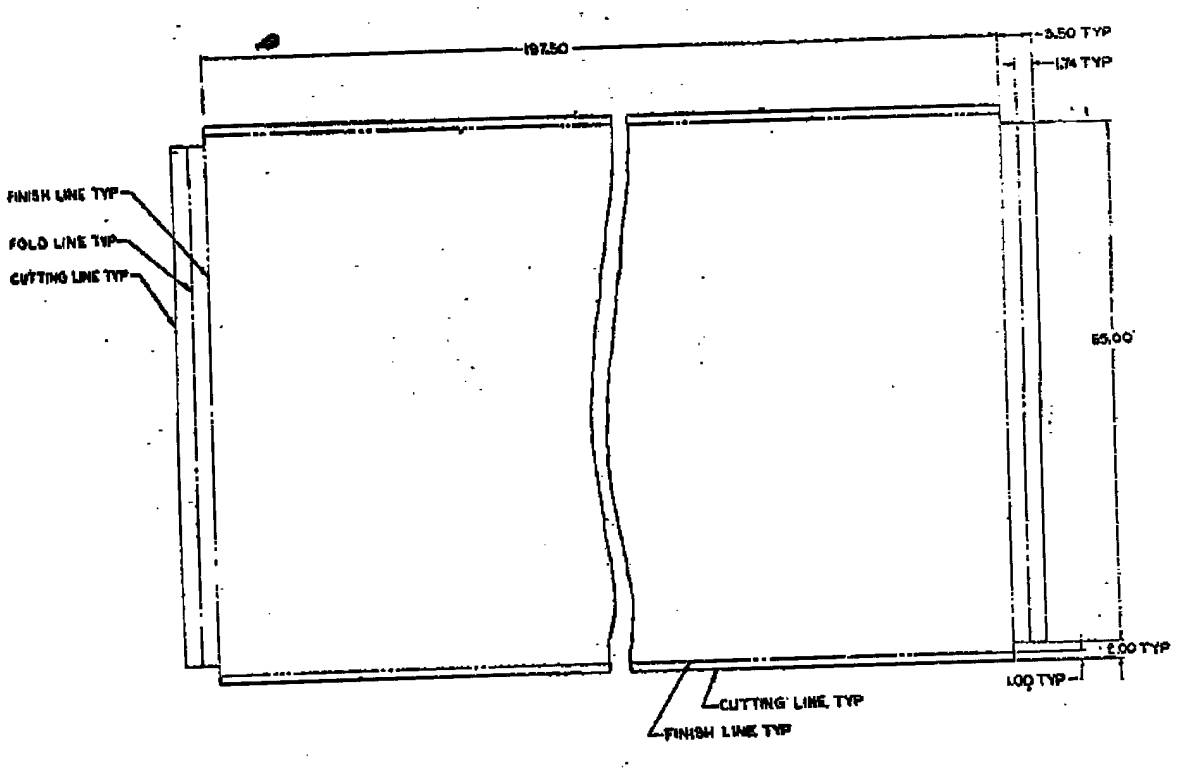
MATERIAL NOTE:
CLOTH, COATED NYLON,
TYPE II, CLASS B, BALANCED COATING
SPEC MIL-C-20696
14 OZ PER SQ YD
COLOR OD NO. X34087 PER
FED-STD-595

FIGURE 54. Cover, side, closure.



MATERIAL NOTE:
CLOTH, COATED NYLON,
TYPE II, CLASS B, BALANCED COATING
SPEC MIL-C-20696
14 OZ PER SQ YD
COLOR OD NO. X34087 PER
FED-STD-595

FIGURE 55. Cover, side, closure.



MATERIAL NOTE:
CLOTH, COATED NYLON,
TYPE II, CLASS B, BALANCED COATING
SPEC MIL-C-20696
14 OZ PER SQ YD
COLOR OD NO. X34087 PER
FED-STD-595

FIGURE 56. Cover, side, closure.

FIG. NO.	QTY REQD	ARMY PART NO.	DESCRIPTION
57A	36	MS20230-WBS3	WASHER
57B	36	MS20230-GBS3	GROMMET
57C	2	538458	FASTENER, SLIDE

FIGURE 57. Hardware-closure cover.

FIG. NO.	NOMENCLATURE	QTY REQD
59	COVER INSTALLATION-LEFT SIDE ELEV.	--
60	COVER INSTALLATION-REAR ELEVATION	--
61	COVER INSTALLATION-FRONT ELEVATION	--
62	COVER INSTALLATION-PLAN VIEW	--
63	ROD-TABULATED DRAWING	--
64	HARDWARE-SEE HARDWARE LIST	--

FIGURE 58. List-closure cover installation.

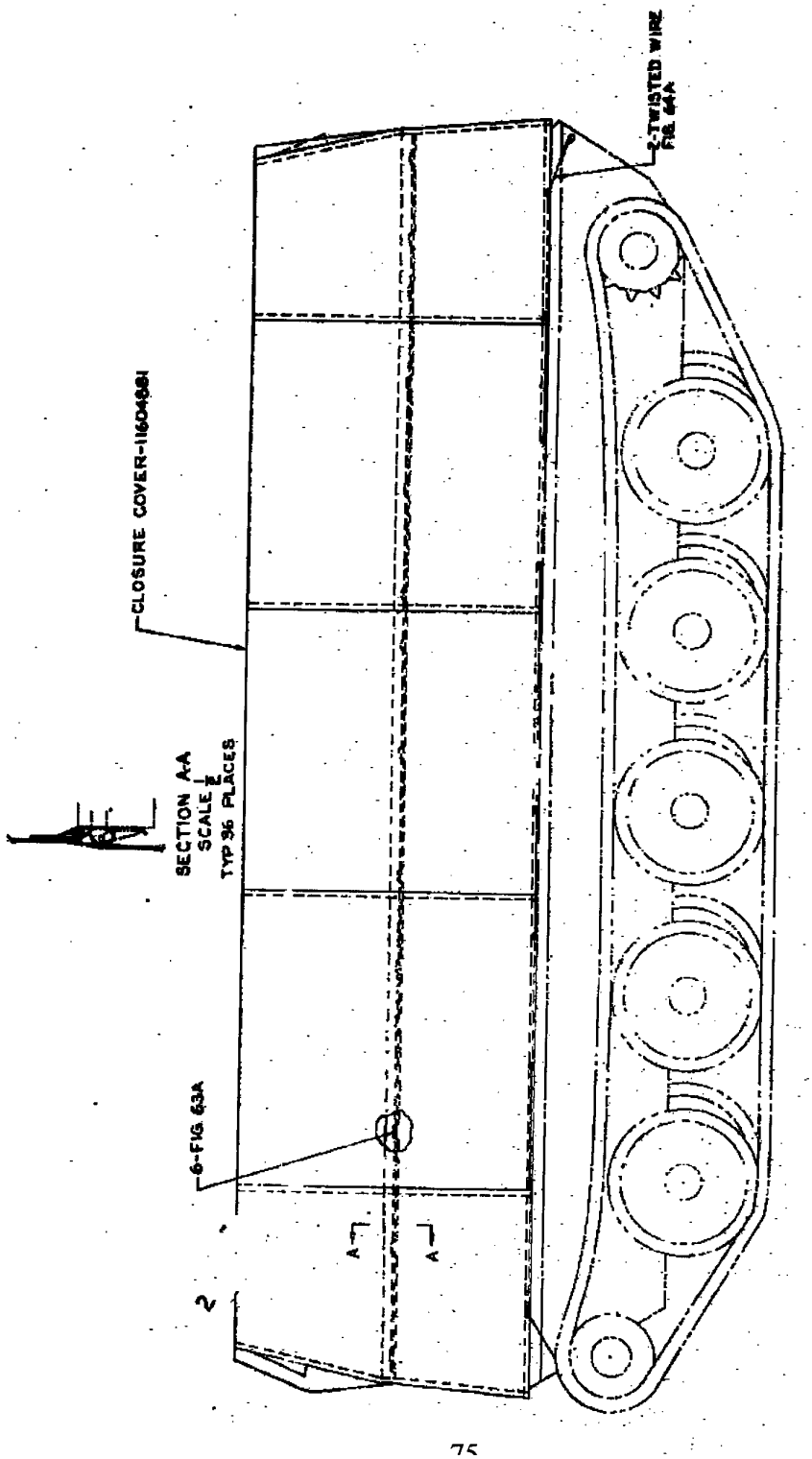


FIGURE 59. Closure cover installation, left side elevation.

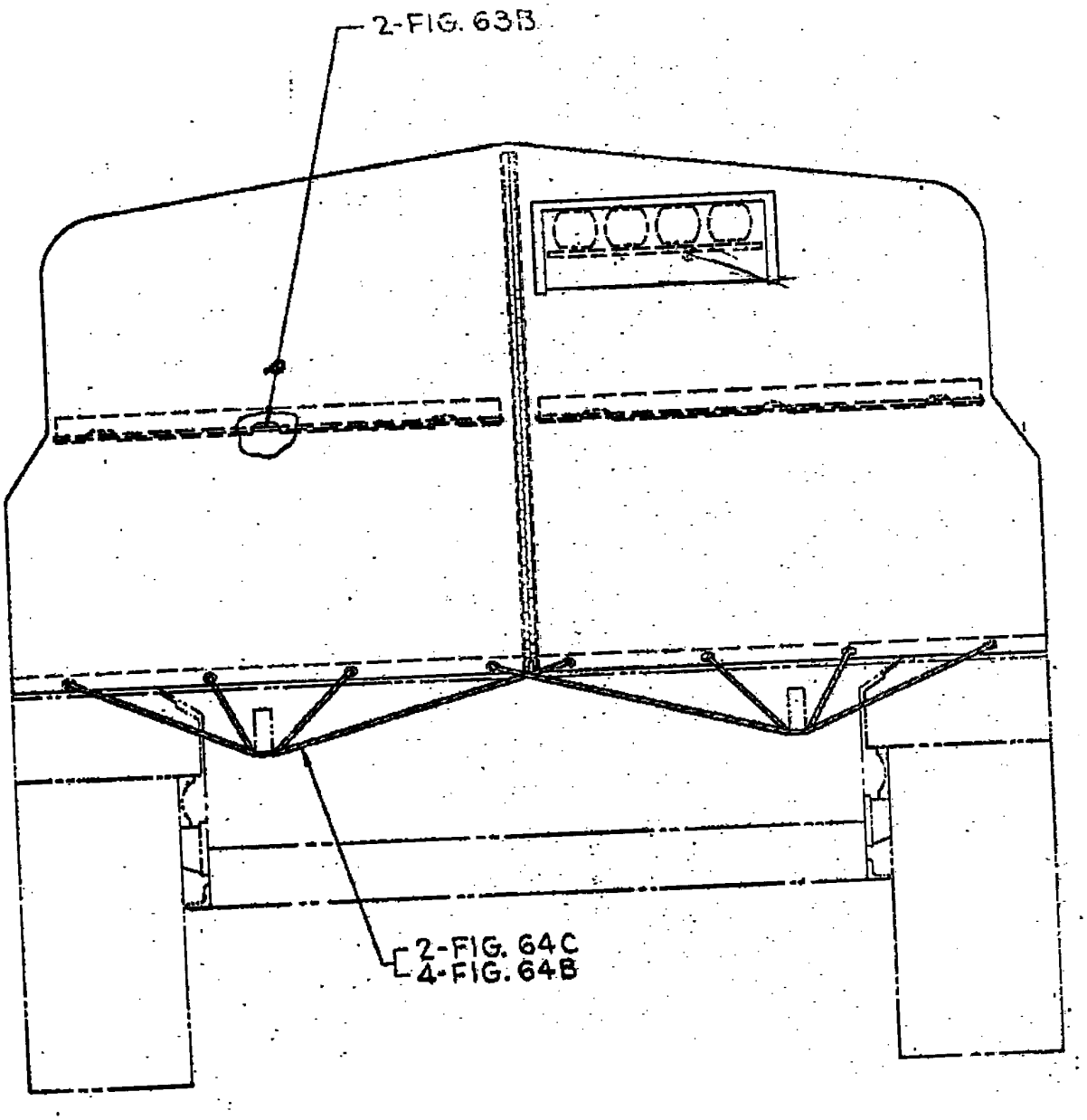


FIGURE 60. Closure cover installation, rear elevation.

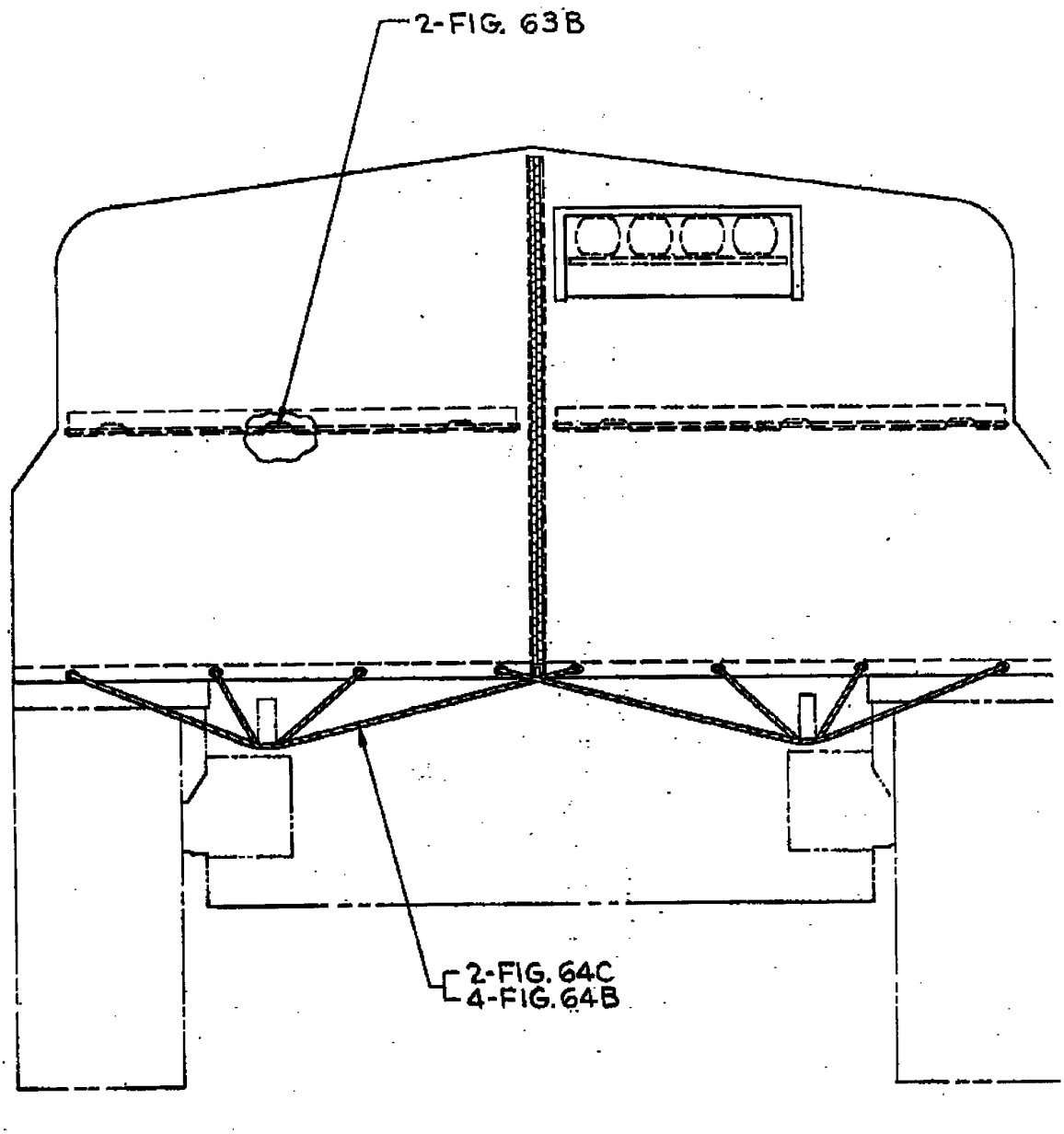


FIGURE 61. Closure cover installation, front elevation.

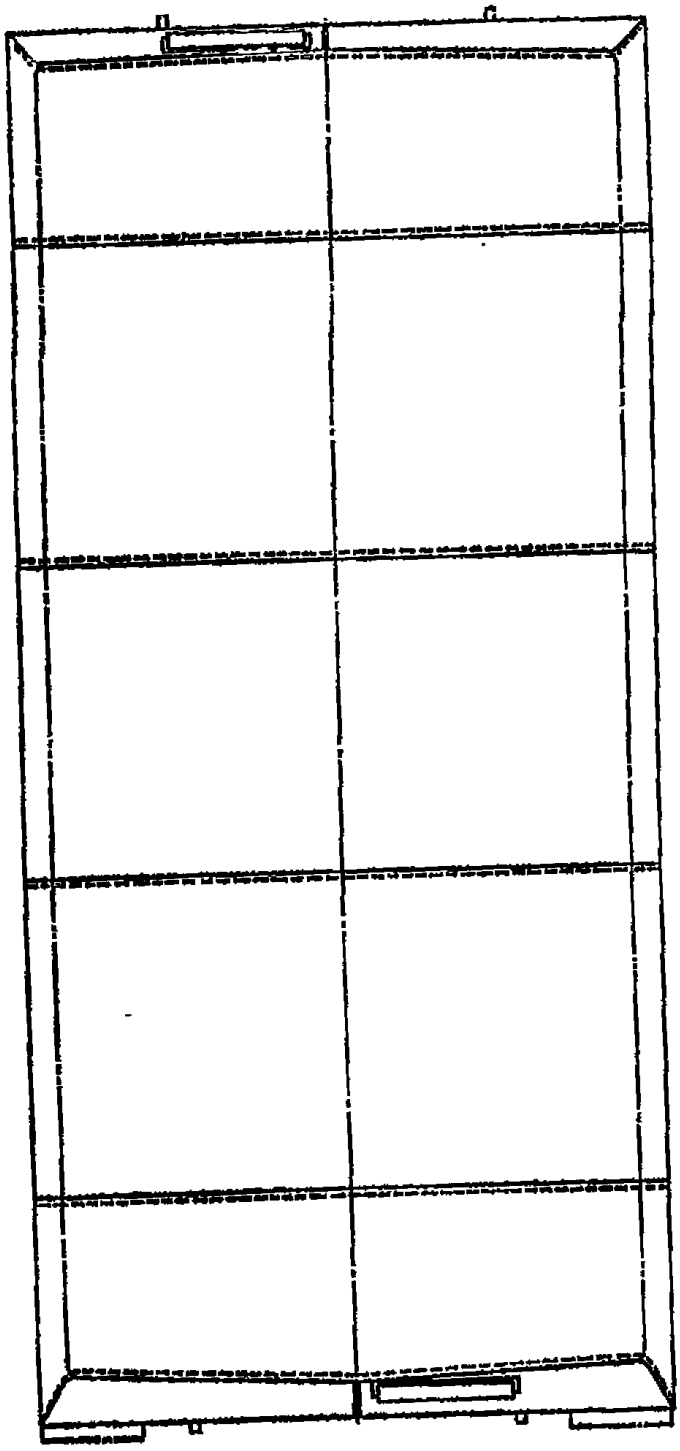


FIGURE 62. Closure cover installation, plan view.

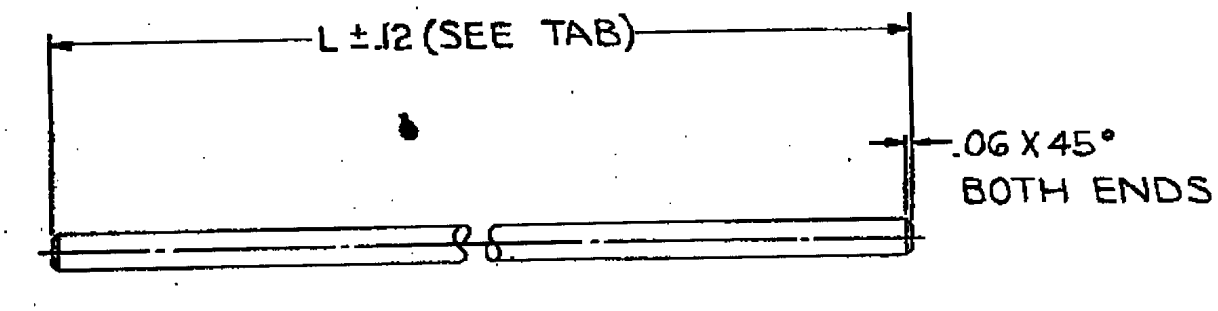


FIG. NO.	L INCHES
63A	79
63B	47.62

FINISH NOTE
TREAT PER TYPE I OR III
SPEC TT-C-490
PRIME PER
SPEC MIL-P-53030

MUST BE FREE OF BURRS AND SHARP EDGES

MATERIAL NOTE
STEEL, CARBON
IN ACCORDANCE WITH ASTM A576, ASTM A675, ASTM A578,
OR ASTM A663., 0.375 DIAMETER

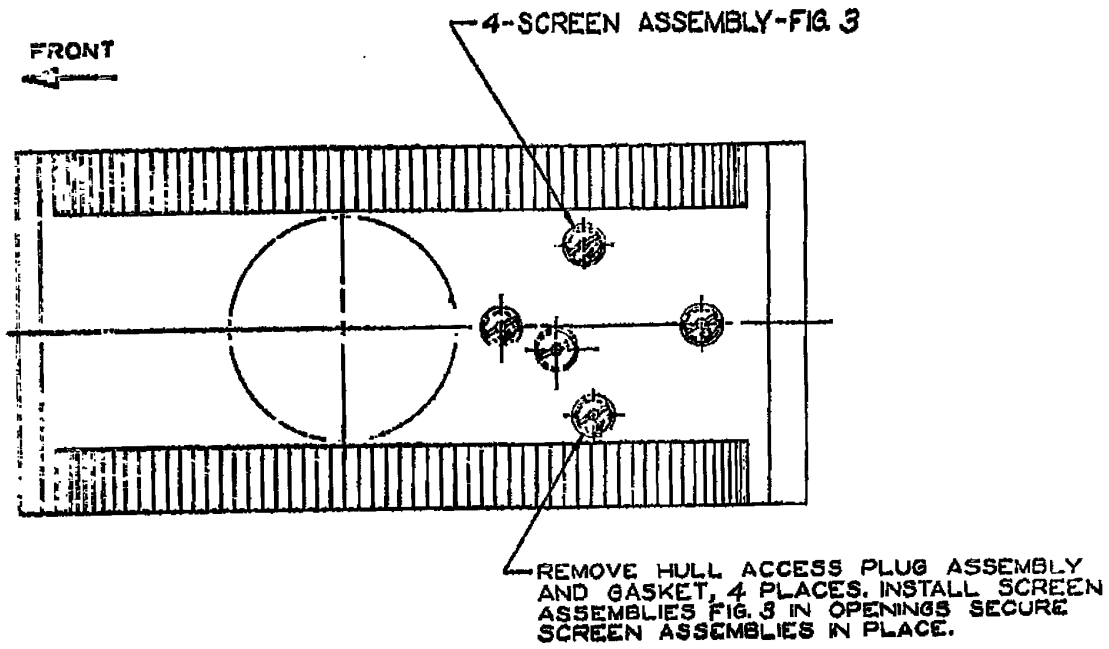
FIGURE 63. Rod, cover, closure.

FIG. NO.	QTY REQD	PART NO.	DESCRIPTION
64A	AS REQD	MS20995-F91	WIRE, GALVANIZED, SPEC QQ-W-461
64B	AS REQD	7359274	CLAMP, ROPE
64C	AS REQD	SEE DWG 8710565	ROPE, COTTON, TWISTED, FEDERAL STOCK NO. 21-R-60

FIGURE 64. Hardware-closure cover installation.

FIG. NO.	NOMENCLATURE	QTY REQD	PART NO.
2	BOTTOM VIEW OF VEH	--	--
3	SCREEN ASSEMBLY	4	
4	RETAINER (WELDMENT)	4	
5	BAR	4	
6	RING	4	
7	SPACER	4	
8	SCREEN	4	
9	PLATE	4	10953399
10	HARDWARE - SEE HARDWARE LIST		

FIGURE 65. Parts list-ventilation kit.



UNPAINTED METAL SURFACES OF PLUG ASSEMBLIES SHALL BE COATED WITH PRESERVATIVE CONFORMING TO GRADE 2 OF MIL-PRF-16173. PLUG ASSEMBLIES AND GASKETS SHALL BE PLACED IN A BOX CONFORMING TO ASTM D1974, IDENTIFIED, AND STOWED WITHING VEHICLE IN A MANNER TO PREVENT MOVEMENT IN TRANSIT. USING WHITE OR YELLOW PAINT CONFORMING TO MIL-P-52905, THE FOLLOWING INFORMATION SHALL BE STENCILED ON THE EXTERIOR OF THE VEHICLE “REMOVE SCREEN ASSEMBLIES, INSTALL ACCESS PLUG ASSEMBLIES AND GASKETS BEFORE VEHICLE OPERATION.”

FIGURE 66. Bottom view of vehicle.

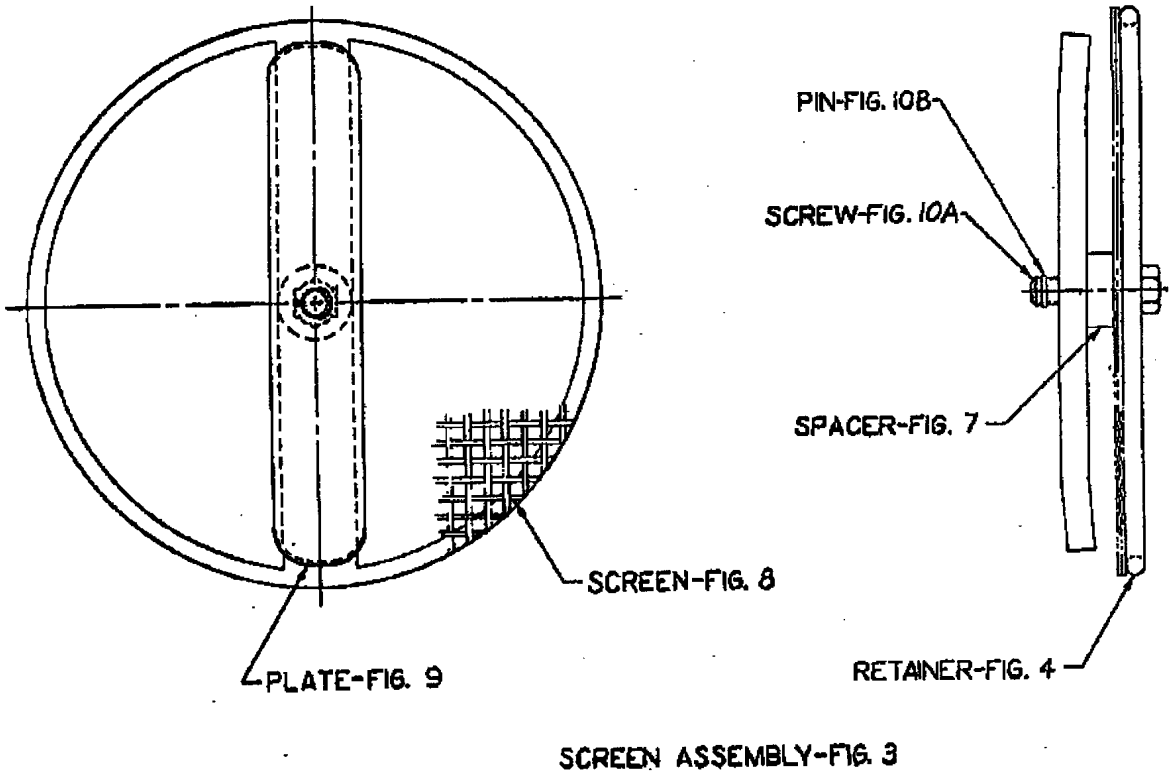
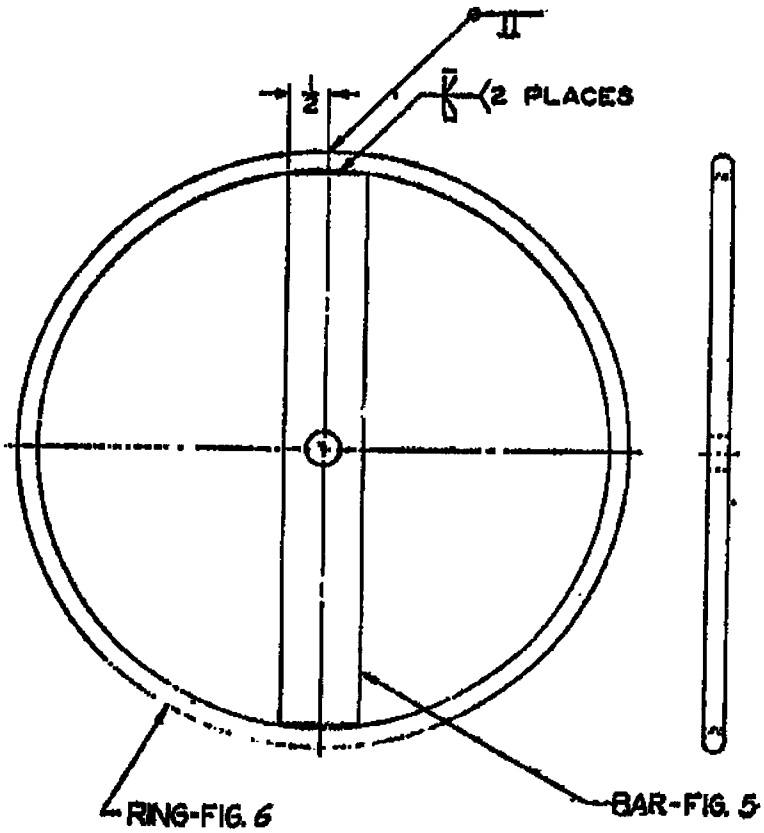


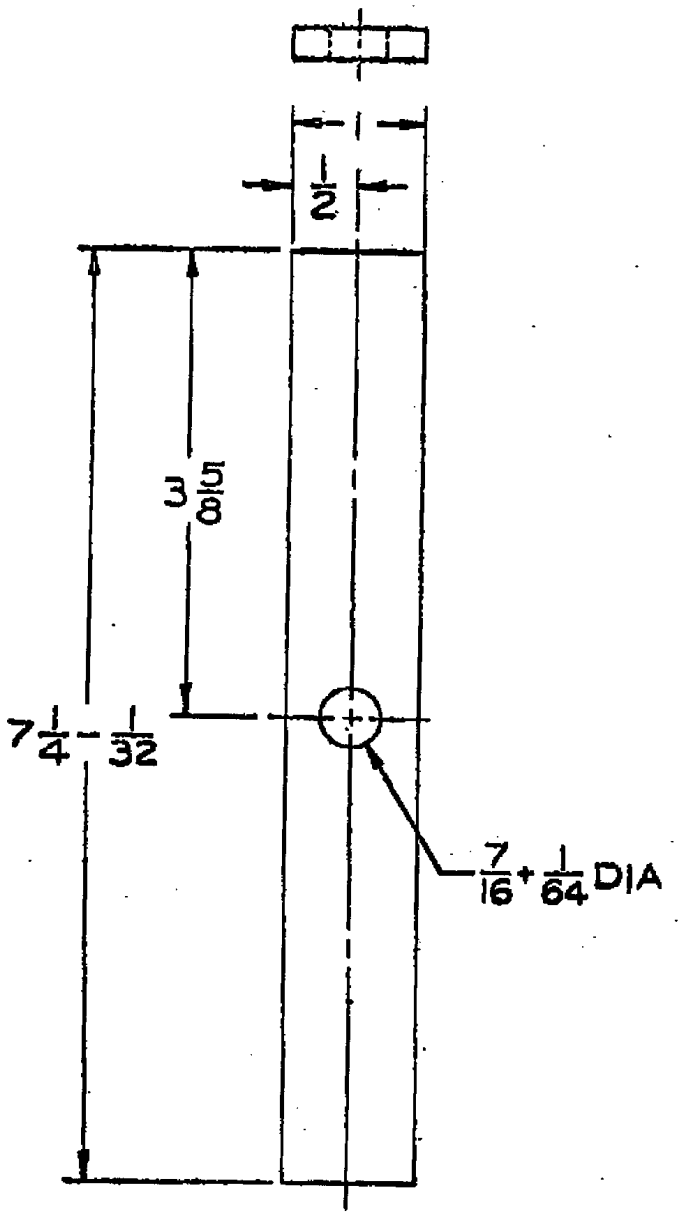
FIGURE 67. Screen assembly.



FINISH NOTE
TREAT PER TYPE I OR III
SPEC TT-C-490
PRIME PER MIL-P-53030
ENAMEL OD
SPEC TT-E-529 OR TT-E-485

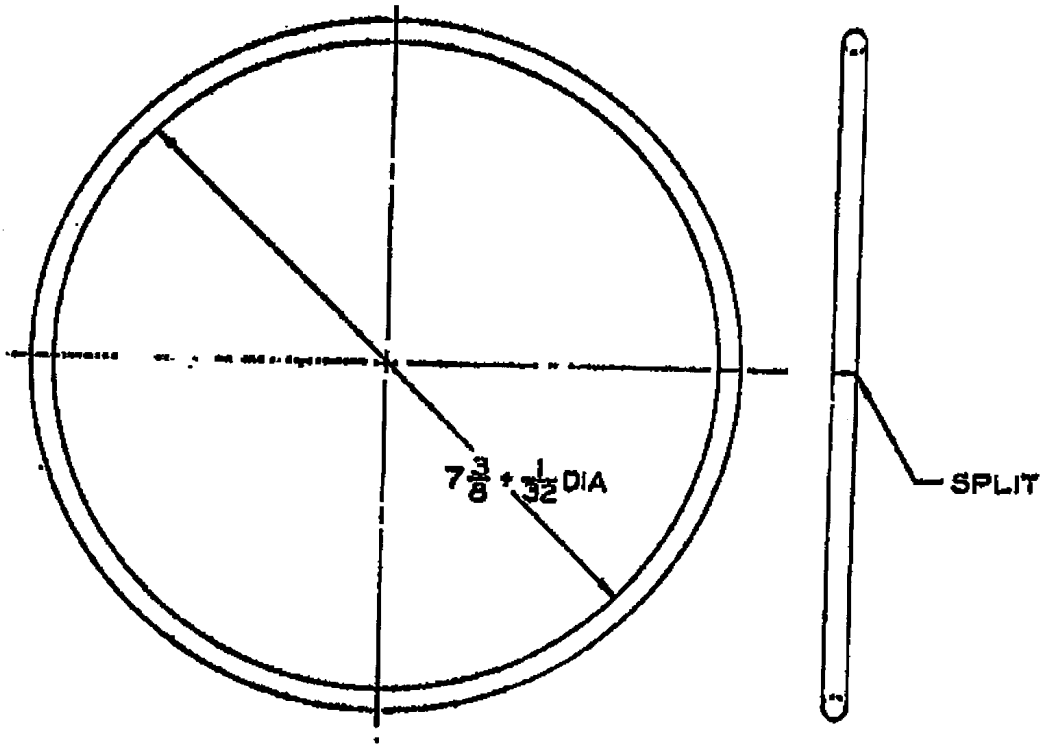
MUST BE FREE OF BURRS AND SHARP EDGES

FIGURE 68. Retainer (weldment).



MATERIAL NOTE
STEEL, CARBON
IN ACCORDANCE WITH ASTM A576, ASTM A675, 0.250 THICK

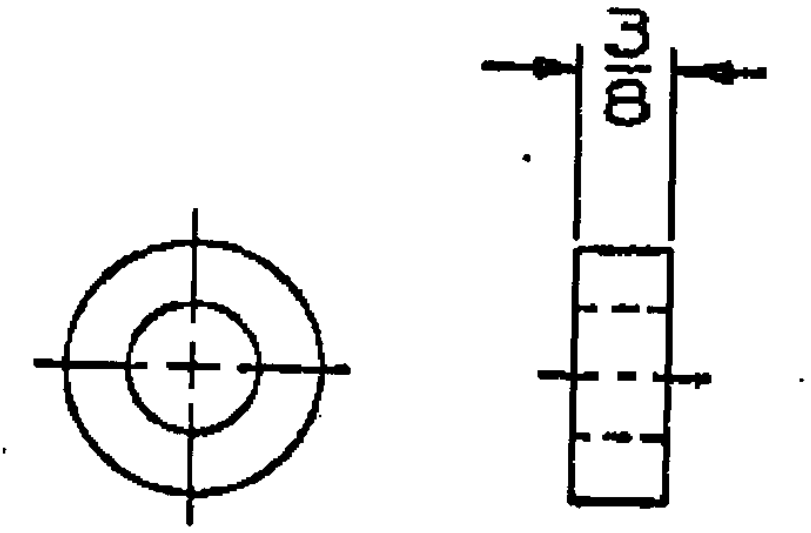
FIGURE 69. Bar.



MATERIAL NOTE
STEEL, CARBON
IN ACCORDANCE WITH ASTM A576, ASTM A675, 0.250 DIAMETER.

MUST BE FREE OF BURRS AND SHARP EDGES

FIGURE 70. Ring.

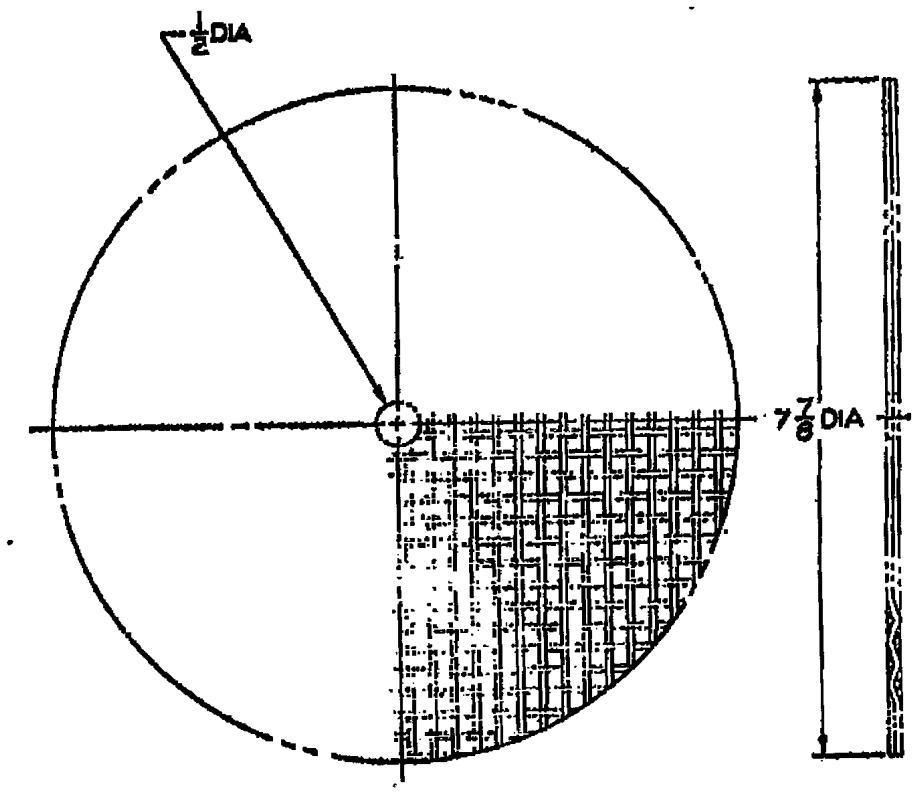


FINISH NOTE
TREAT PER TYPE I OR III
SPEC TT-C-490
PRIME PER MIL-P-53030
ENAMEL OD
SPEC TT-E-529 OR TT-E-485

OPTIONAL MATERIAL
STEEL CARBON, IN ACCORDANCE WITH ASTM A576, ASTM A675, 1.000 DIA

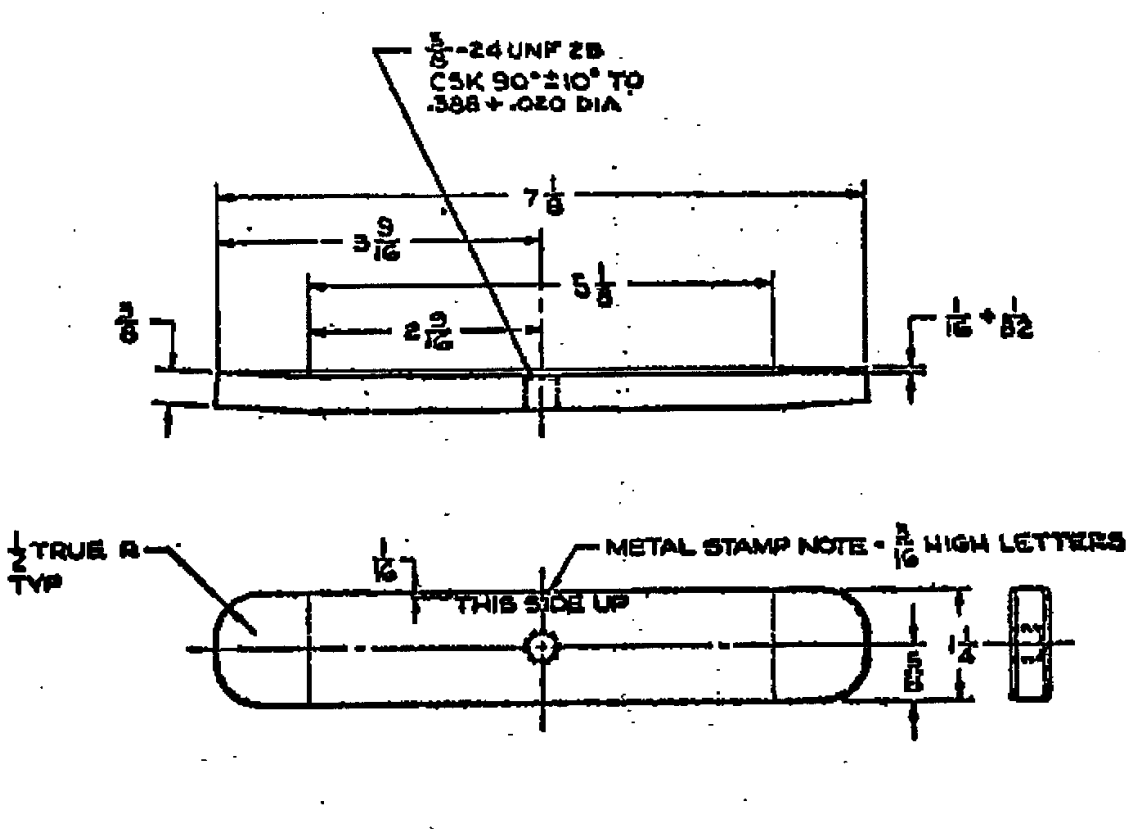
MATERIAL NOTE
TUBE, CARBON STEEL, SEAMLESS, IN ACCORDANCE WITH ASTM A853, ASTM A 818, ASTM A641, OR ASTM A809, OD X 0.250 WALL THICKNESS.

FIGURE 71. Spacer.



MATERIAL NOTE
WIRE CLOTH, STEEL, LOW CARBON, HOT GALVANIZED, 4X4 MESH
SPEC A-A-1037, 0.0 DIAMETER WIRE

FIGURE 72. Screen.



FINISH NOTE
PLATING, CADMIUM, CLASS 2, TYPE II
SPEC QQ-P-416

MUST BE FREE OF BURRS AND SHARP EDGES

MATERIAL NOTE
STEEL, CARBON, ASTM A575, ASTM A663

FIGURE 73. Plate.

FIG. NO.	QTY REQD	PART NO.	DESCRIPTION	MATERIAL
10A	4	MS51108-62	SCREW, MACHINE-3/8-24UNF-2Ax1-1/2	ALLOY STEEL
10B	4	MS24665-283	PIN, COTTER-3/32 DIA. x 3/4 LONG	CARBON STEEL

FIGURE 74. Hardware-ventilation kit assembly.

FIG. NO.	NOMENCLATURE	QTY REQD
2	MATERIAL LIST	--
3	SADDLE ASSEMBLY-PLAN VIEW	--
4	SADDLE ASSEMBLY-SIDE VIEW	--
5	SADDLE ASSEMBLY-END VIEW	--
6	BRACKET, LEFT, REAR	1
7	BRACKET, RIGHT, REAR	1
8	BRACKET, SIDE	2
9	SUPPORT, PLATFORM	4
10	PLANK, PLATFORM	7
11	PLANK, PLATFORM	3
12	BRACE	2
13	BRACE	1
14	BRACE	2
15	HARDWARE, OVE SADDLE ASSEMBLY. SEE HARDWARE LIST	--

FIGURE 75. Parts list-OVE saddle assembly.

DESCRIPTION	QTY REQD
1 x 6 WOOD (COMMERCIAL SIZE)	62 FEET LONG
2 x 4 WOOD (COMMERCIAL SIZE)	13 FEET LONG
2 x 6 WOOD (COMMERCIAL SIZE)	25 FEET LONG
1/4 x 2 STEEL STRIP	19 INCHES LONG
1 1/2 x 1 1/2 x 1/4 ANGLE, STEEL	38 INCHES LONG

FIGURE 76. Material list - OVE saddle assembly.

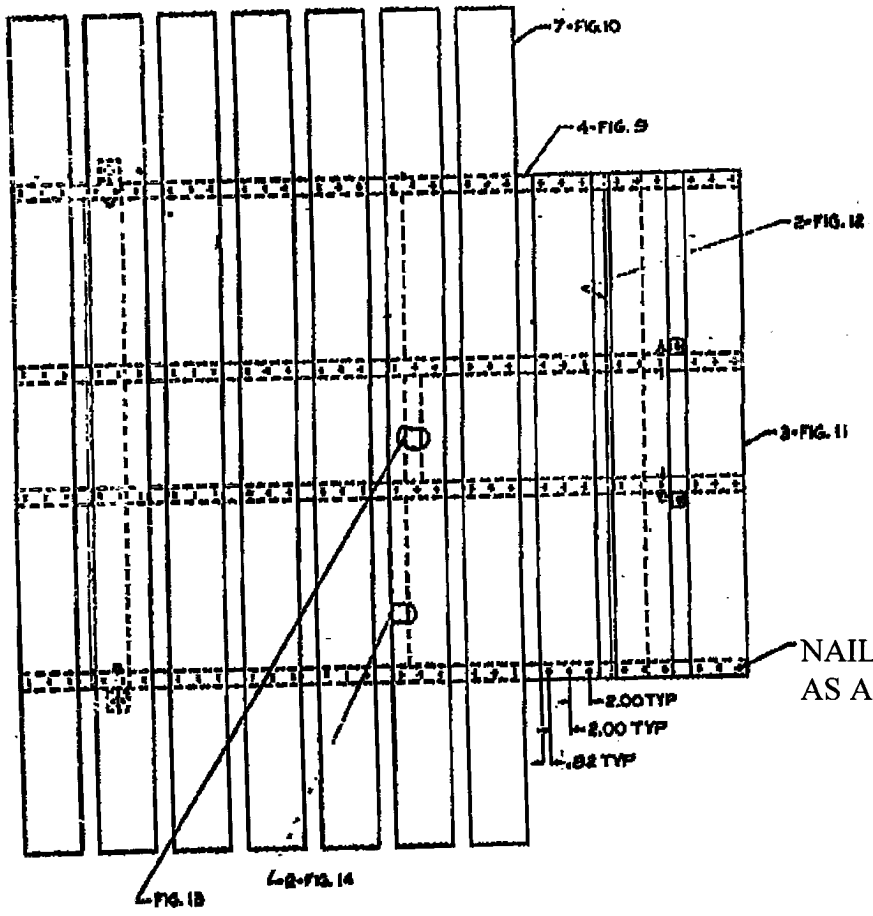
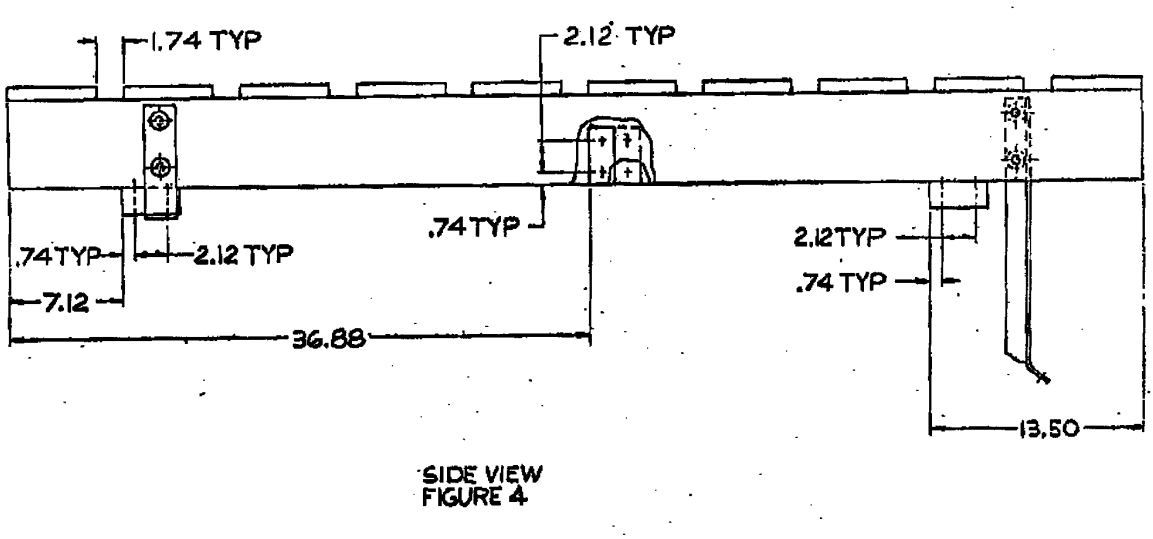
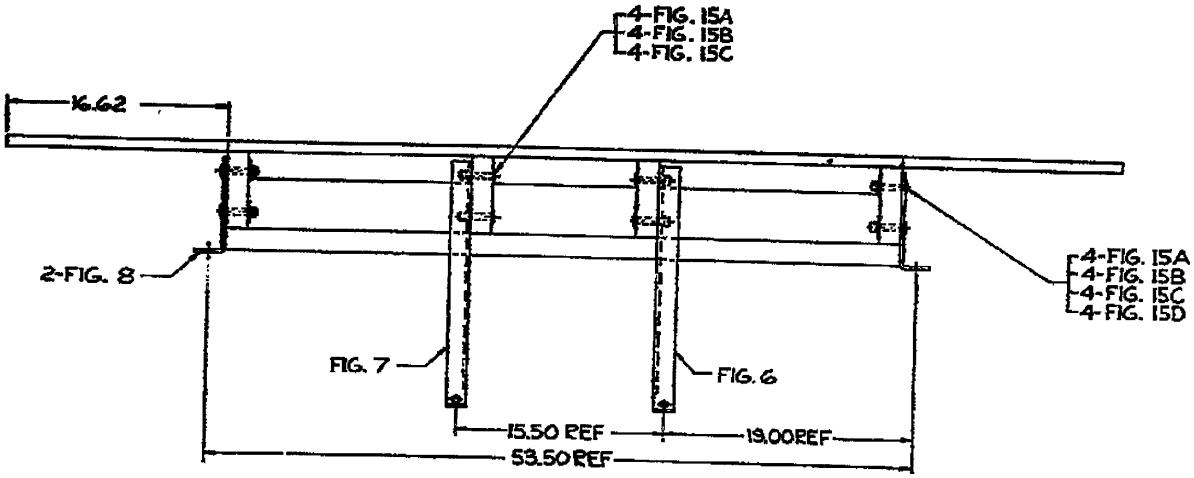


FIGURE 77. Saddle assembly, plan view.



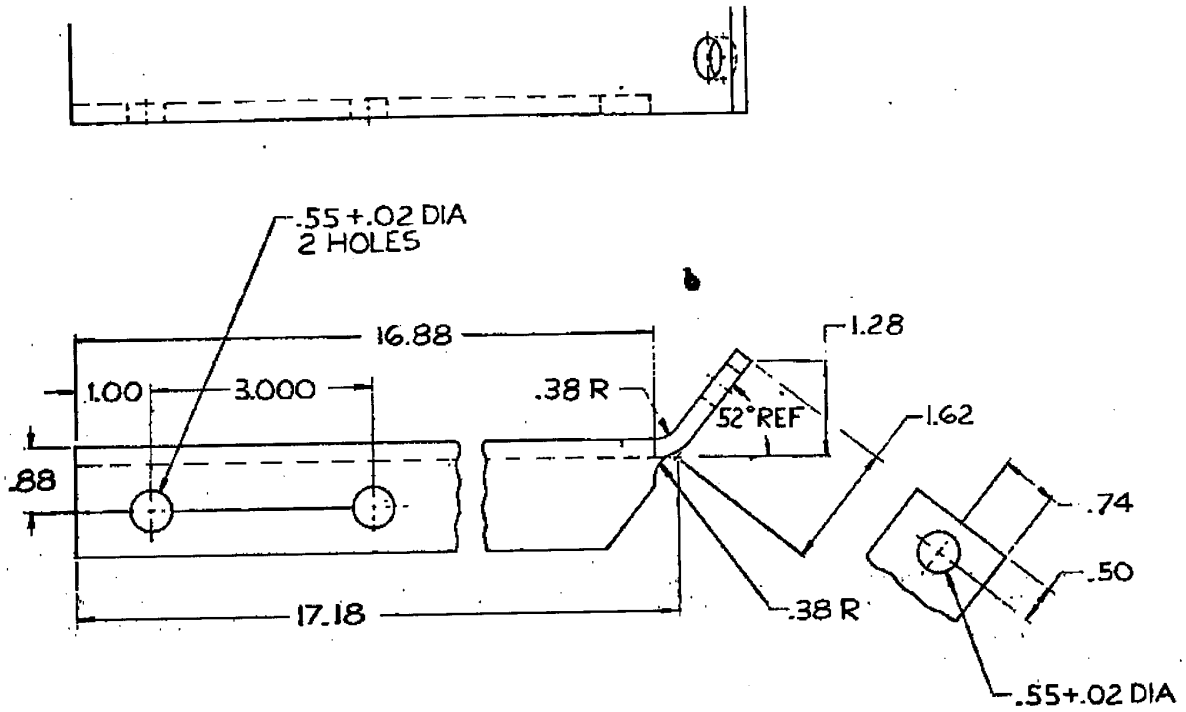
DRAWING NO.
F 11604898

FIGURE 78. Saddle assembly, side view.



DRAWING NO.
F 11604898

FIGURE 79. Saddle assembly, end view.

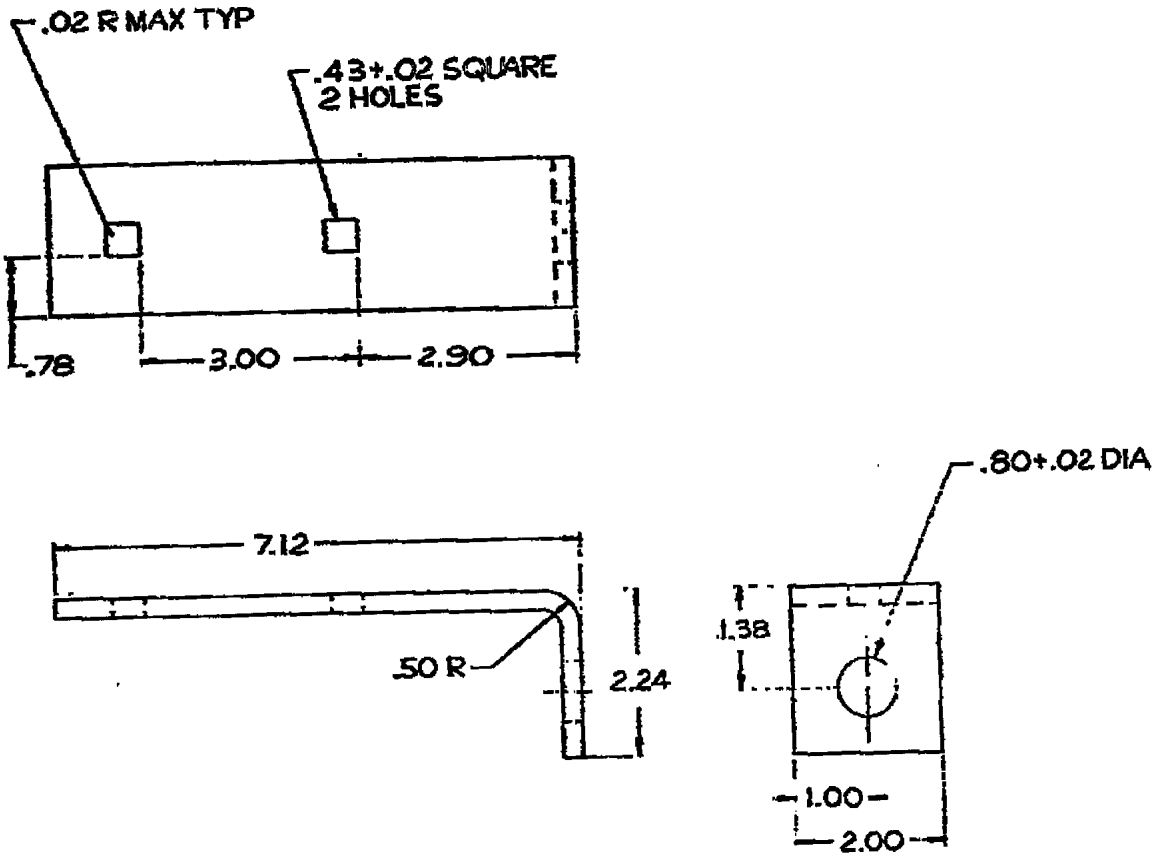


FINISH NOTE
TREAT PER TYPE I OR III
SPEC TT-C-490
PRIME PER MIL-P-53030
ENAMEL OD
SPEC TT-E-529 OR TT-E-485

MUST BE FREE OF BURRS AND SHARP EDGES

MATERIAL NOTE
STEEL, CARBON, IN ACCORDANCE WITH ASTM A36, 1 ½

FIGURE 80. Bracket, left, rear (shown). FIGURE 81. Bracket, right, rear (opposite).

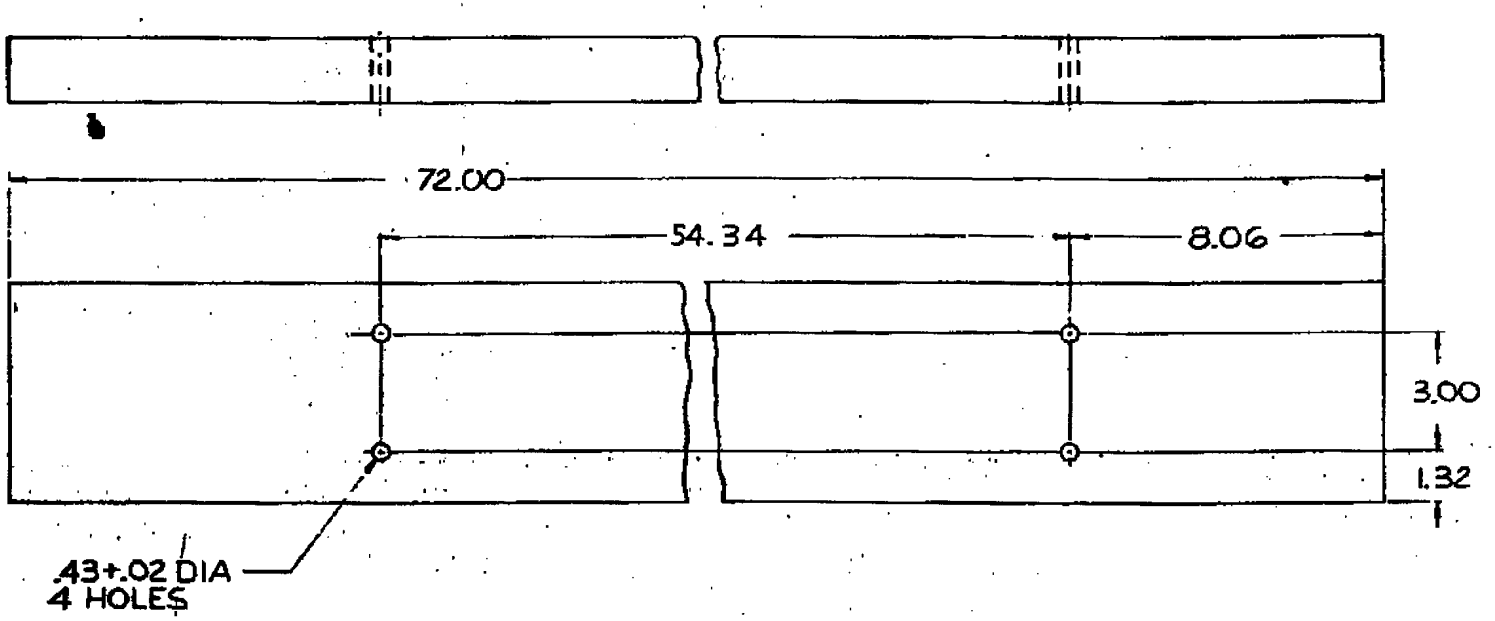


TREAT PER TYPE I OR III
SPEC TT-C-490
PRIME PER
SPEC MIL-P-53030

MUST BE FREE OF BURRS AND SHARP EDGES

MATERIAL NOTE
STEEL, CARBON
IN ACCORDANCE WITH ASTM A576, ASTM A675, ASTM A578, OR
ASTM A663, 0.250 THICK

FIGURE 82. Bracket, side.

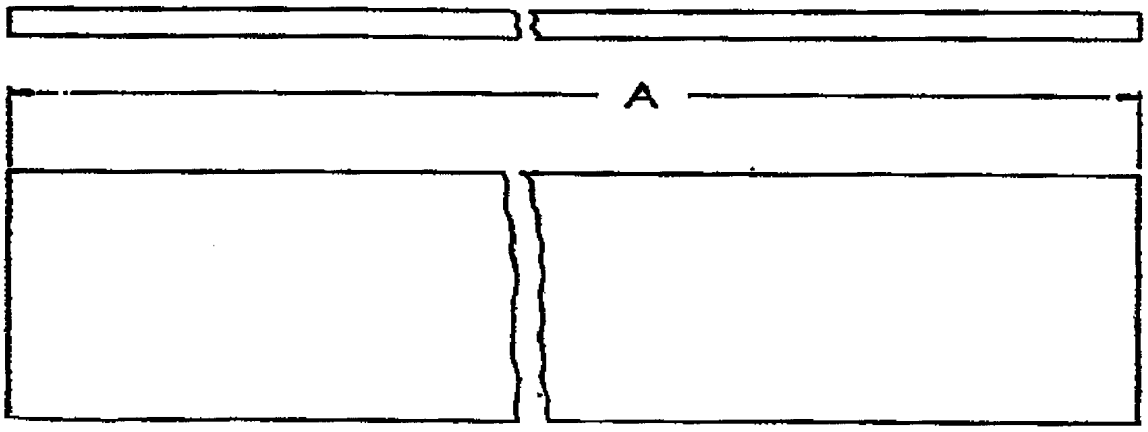


DRAWING NO.
F 11604898

MATERIAL NOTE

WOOD, SIZE 2 X 6,
IN ACCORDANCE WITH A-A-52520

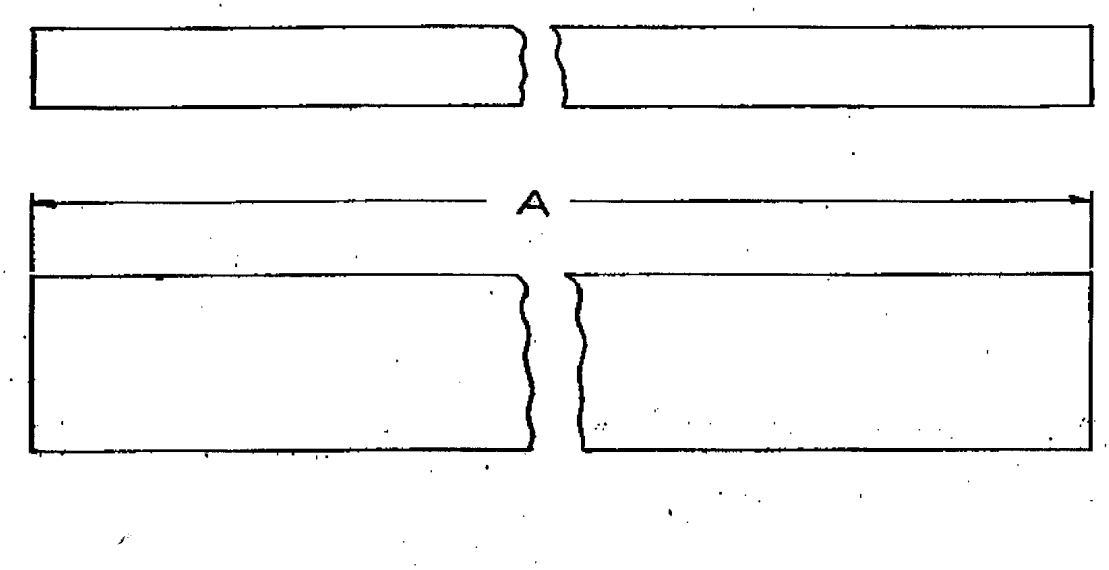
FIGURE 83. Support, platform.



MATERIAL NOTE
WOOD CONFORMING TO A-A-52520,.1 X 6

FIGURE 84. Plank, platform, A=84.0.

FIGURE 85. Plank, platform, A=50.74.



MATERIAL NOTE
WOOD CONFORMING TO A-A-52520,.1 X 6

FIGURE 86. Brace, A=50.74. FIGURE 87. Brace, A=10.74. FIGURE 88. Brace, A=16.74.

FIG. NO.	ARMY PART NO.	DESCRIPTION	MATERIAL	QTY REQD
15A	MS35338-65	WASHER, LOCK, SPLIT 3/8	CARBON STEEL	8
15B	MS51967-9	NUT, PLAIN, HEX 3/8-16 UNC-2B	CARBON STEEL	8
15C	MS35751-45	BOLT, SQ.NECK, 3/8-16 UNC-2A x 2 1/2	CARBON STEEL	8
15D	MS63040-6	WASHER, FLAT 3/8	CARBON STEEL	4

FIGURE 89. Hardware - OVE saddle assembly.

FIG. NO.	NOMENCLATURE	QTY REQD
17	OVE SADDLE INSTALLATION-PLAN VIEW	--
18	OVE SADDLE INSTALLATION-SIDE VIEW	--
19	OVE SADDLE INSTALLATION-END VIEW	--
20	HARDWARE-SEE HARDWARE LIST	--

FIGURE 90. Parts list - OVE saddle installation.

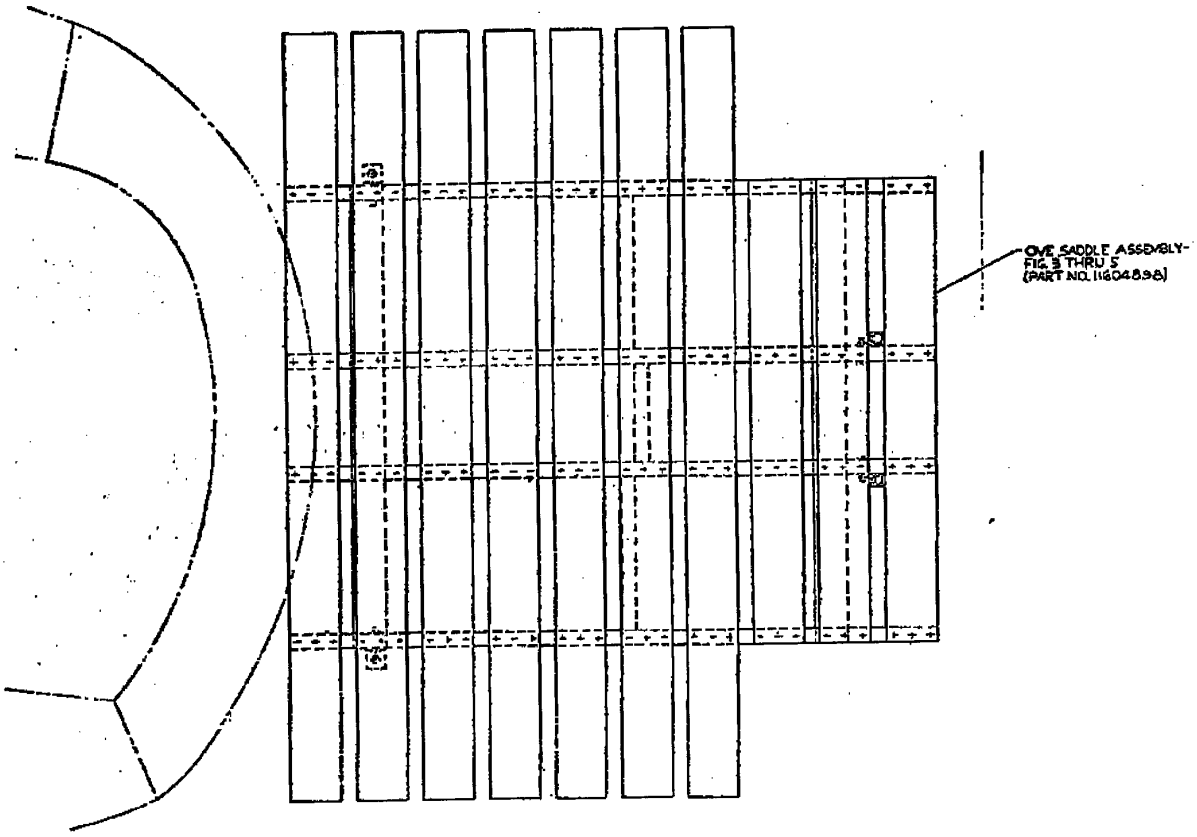


FIGURE 91. Plan view.

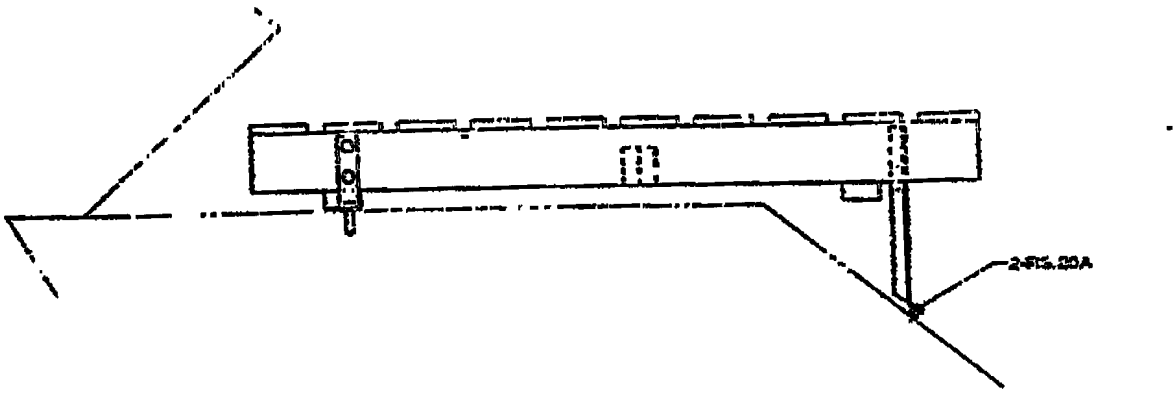


FIGURE 92. OVE saddle installation, side view.

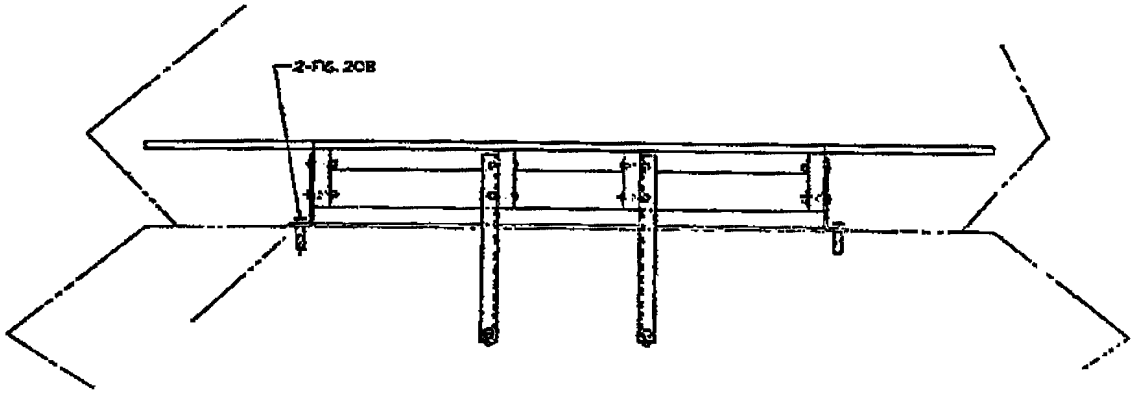


FIGURE 93. OVE saddle installation, end view.

FIG. NO.	ARMY PART NO.	DESCRIPTION	MATERIAL	QTY REQD
20A	ASME B18.2.1	SCREW, CAP 1/2-13UNC-2A x 7/8	ALLOY STEEL	2
20B	ASME B18.2.1	SCREW, CAP 3/4-16UNF-2A x 2 1/2	ALLOY STEEL	2

FIGURE 94. Hardware - OVE saddle installation.

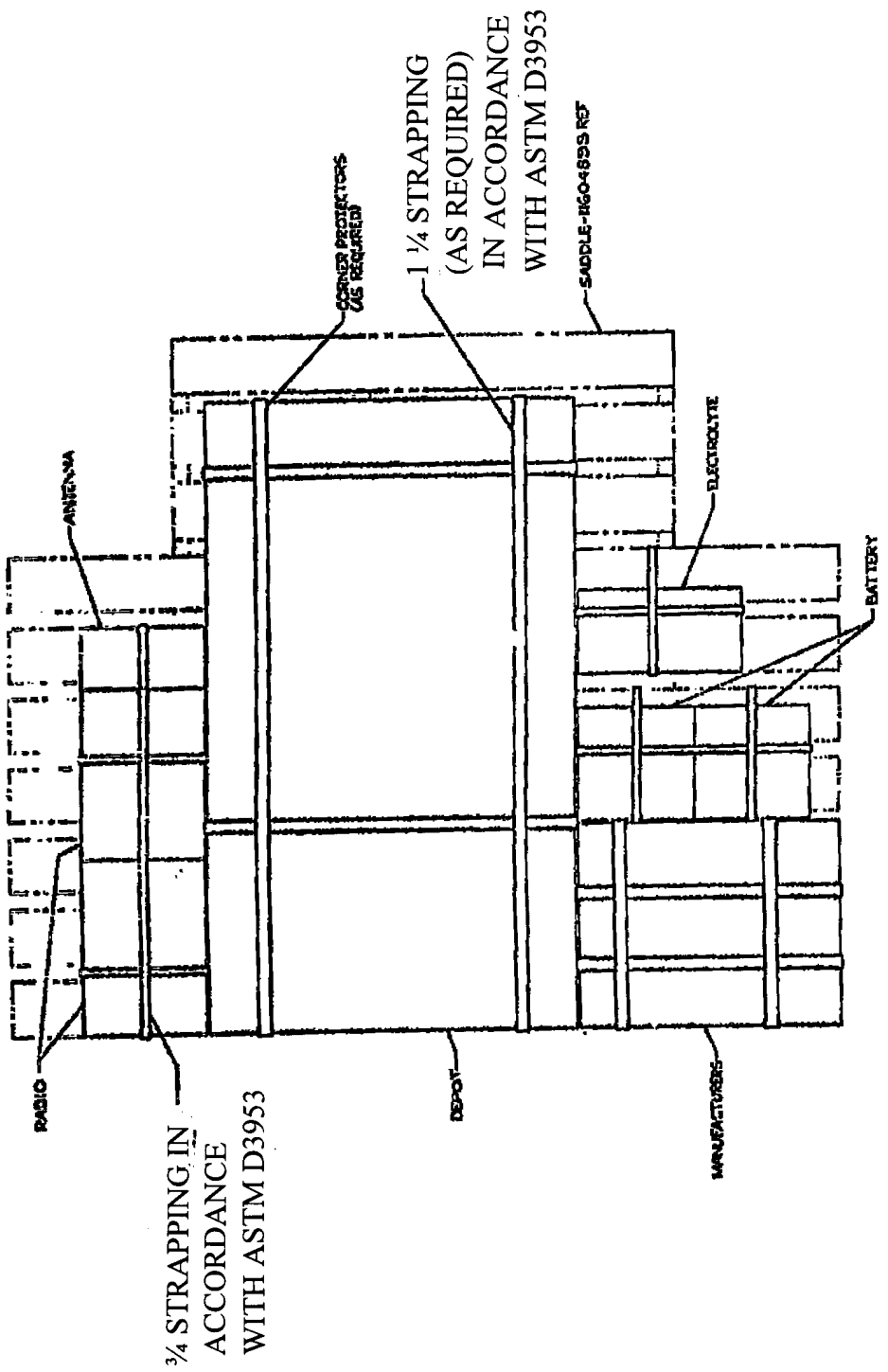


FIGURE 95. Plan view.

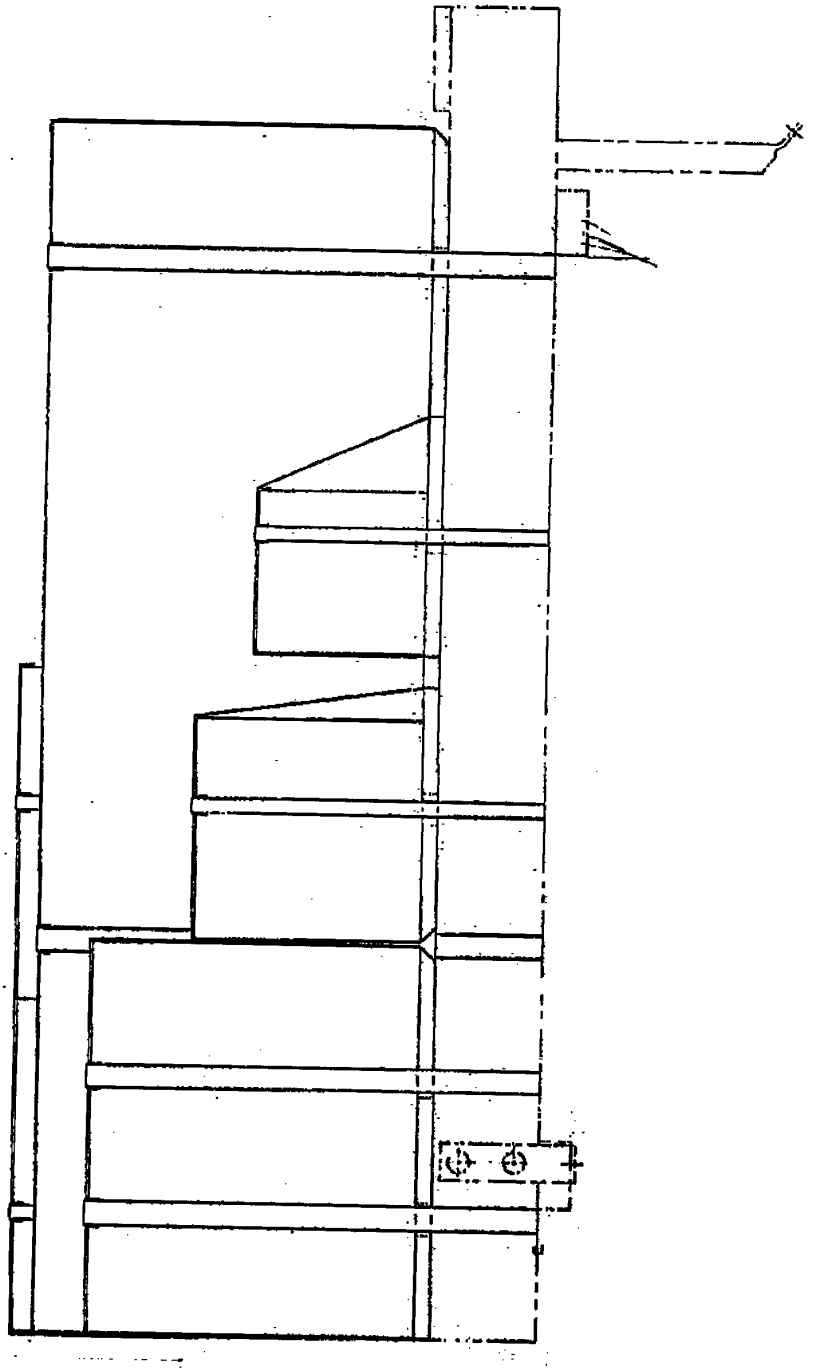


FIGURE 96. Right side.

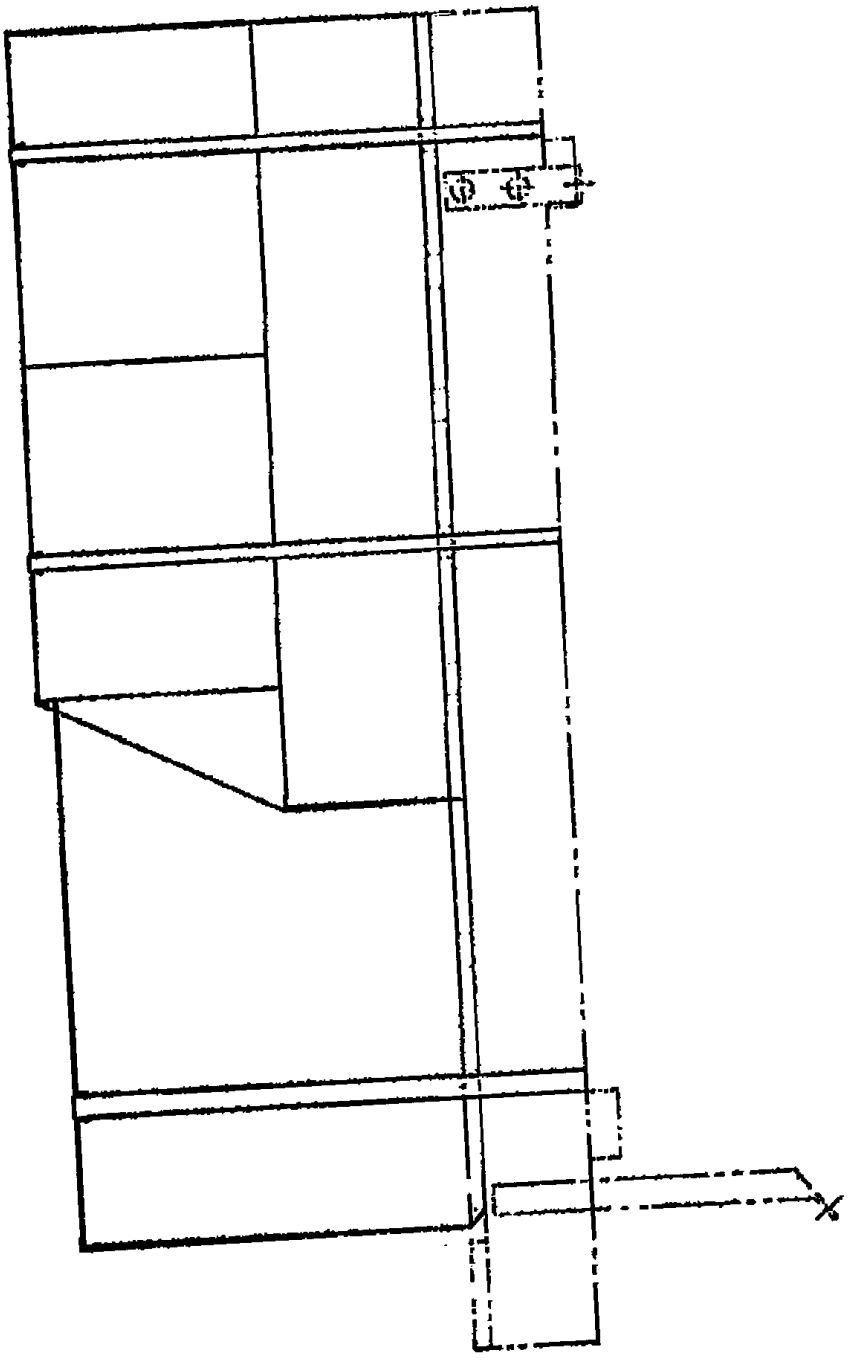


FIGURE 97. Left side.